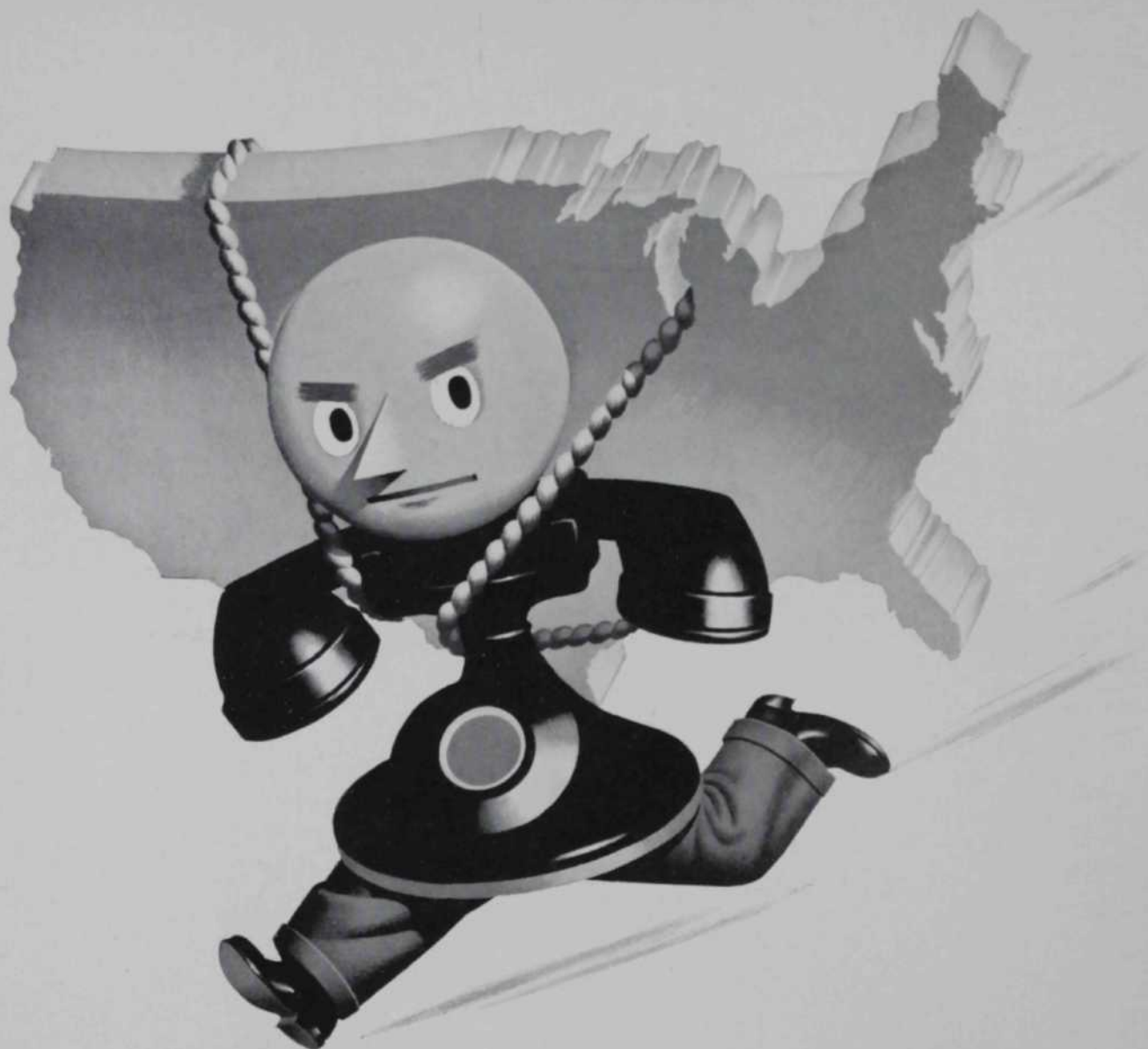


NATION'S BUSINESS

FEBRUARY • 1942





When the Nation hurries, it turns to the telephone

THE country is making over 85,000,000 calls a day right now — local and Long Distance — and that keeps us stepping.

We've added hundreds of thousands of miles in wire and cable and tens of thousands of people to the Bell System. We are doing everything else possible to keep things going smoothly.

But, if once in a while your calls don't

go through as promptly as they did in peace times, please remember that business is not as usual with us. The telephone is tied tight into the war.

P. S. This is a good time to make just a little more certain to give the correct number and to answer promptly. The best time to make Long Distance calls is in the off-peak periods—before 10 in the morning, between noon and 2 P.M. or after 8 in the evening.

Now—more than ever before—LONG DISTANCE helps unite the Nation



What does do for you?



Rooky: Some blaze! You could buy a battleship with the dough this bon-fire's gonna eat up.

Old Timer: Aw, I dunno. We'll lick it. Look at the pressure we got. And we can get it from every fire plug in town.

Rooky: Yeh? How about the big West End fire, when I was a kid? Those hydrants were dribblers.

Old Timer: But that was 'fore this town was inspected* by the insurance companies. The whole fire-fighting system's been done over from reservoir to nozzle. That inspection was the best thing ever happened 'round here.

**Communities that follow recommendations in these surveys made by capital stock company fire insurance often save many times the cost of improvements through lowered fire losses.*

If you have your insurance in these capital stock companies, you have Standard Protection. And your local insurance agent, or broker, personally sees to it that you have the right policies for your particular needs.

THE NATIONAL BOARD OF FIRE UNDERWRITERS, 85 John St., New York • Est. 1866 • Nation-wide organization of 200 capital stock fire insurance companies

Nation's Business is published on the 30th of every month by the Chamber of Commerce of the United States, Publication Office, Washington, D. C. Editorial, Advertising and Circulation Offices, 1615 H Street, N. W., Washington, D. C. Subscription price \$3.00 one year; \$7.50 three years; 25 cents a copy. Entered as second-class matter March 20, 1920 at the Post Office at Washington, D. C., additional entry at Greenwich, Conn., under the Act of March 3, 1879. Printed in U. S. A.

Look Beyond the TRADE-MARK

...Look at the MOTOR!



Copperspun
Patented

YES, we are proud of the F-M trade-mark. But we are far more proud of the kind of motor on which that trade-mark appears. We know, and you know, that it's the motor and not the trade-mark that runs machinery.

That's why we ask you, when buying, to look beyond the trade-mark—*look at the motor.*

Look at the construction of a Fairbanks-Morse Motor point by point. Compare the Copperspun Rotor with any other type of rotor. Then ask yourself whether you want windings centrifugally cast of *COPPER* or of some less suitable material.

We believe that you know motor quality when you see it. That's why we ask you to look at the MOTOR. A post card or telephone call will bring you a demonstration. Fairbanks, Morse & Co., Dept. B56, 600 S. Michigan Ave., Chicago. Branches and service stations throughout United States and Canada.

FAIRBANKS • MORSE MOTORS

DIESEL ENGINES ELECTRICAL MACHINERY MAGNETOS RAILROAD EQUIPMENT WASHERS-IRONERS
STOKERS PUMPS MOTORS WATER SYSTEMS FARM EQUIPMENT AIR CONDITIONERS

What goes on inside your head about G-E Fluorescent Lighting?



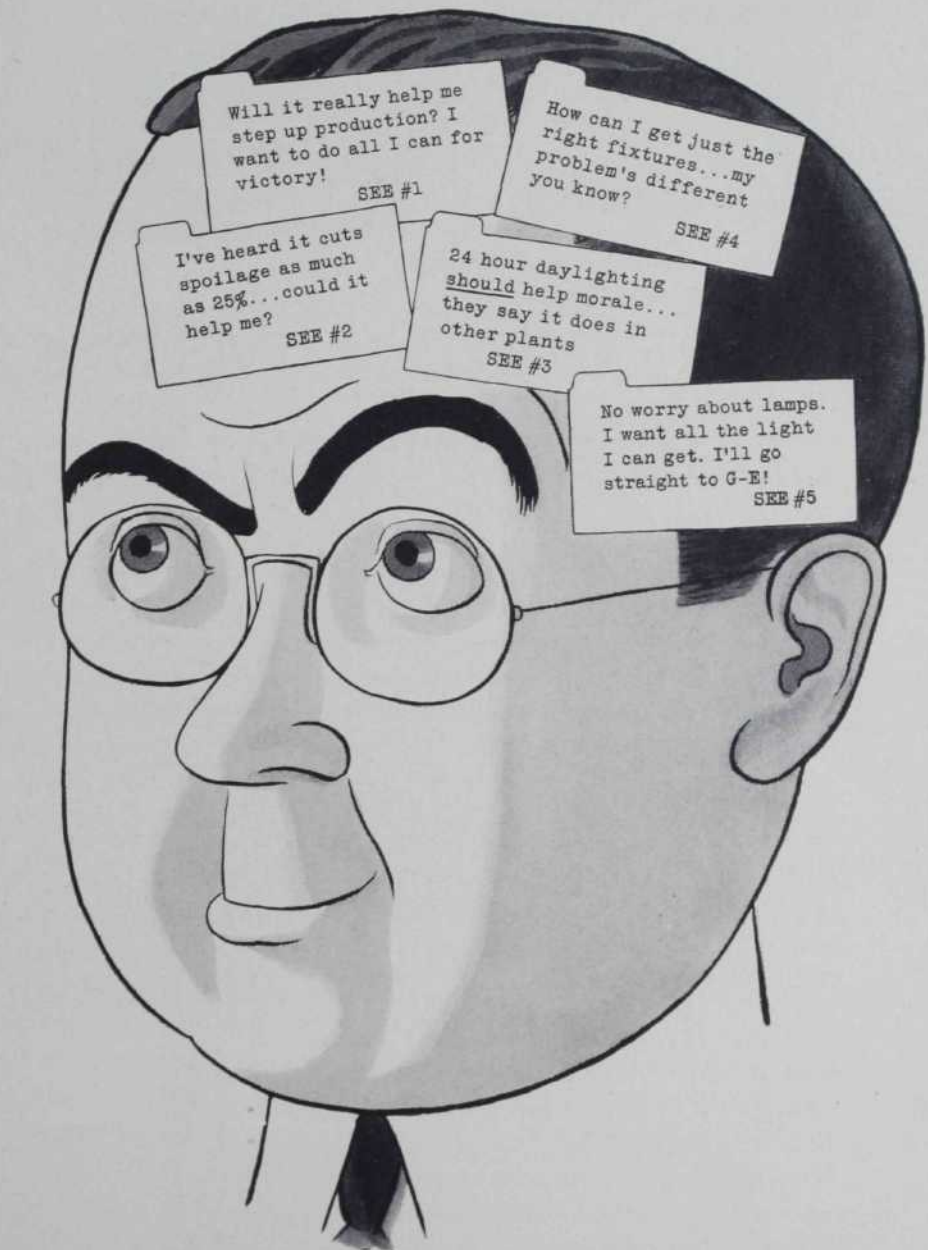
#1 Yes! G-E fluorescent lighting, properly engineered and installed, may actually increase your production as much as 5 to 15% or more! "Production nearly doubled, using same machines and no extra labor," says a printing plant. "Machine repair time cut 20%," says a textile mill. One office reports a 20% speedup in typing, thanks to this new, energy-saving indoor daylight!



#2 "25% reduction in scrapped pieces," says a machine shop. "No more errors due to temperature rises," says another. Speeds inspection, too. "No time lost hunting good light for micrometer readings," says a machine tool manufacturer. You see faster, more easily, with G-E MAZDA "F" (fluorescent) lamps on the job!



#3 Daytime morale on the night shift! "Less complaint about eyestrain," says one manufacturer. "50% fewer accidents," says a machine shop. "Men don't walk away from machines every hour to relax," says a machine tool maker. One plant reports 30% less call for headache tablets since this cooler, more abundant lighting was put in!



Will it really help me step up production? I want to do all I can for victory!

SEE #1

How can I get just the right fixtures...my problem's different you know?

SEE #4

I've heard it cuts spoilage as much as 25%...could it help me?

SEE #2

24 hour daylighting should help morale...they say it does in other plants

SEE #3

No worry about lamps. I want all the light I can get. I'll go straight to G-E!

SEE #5

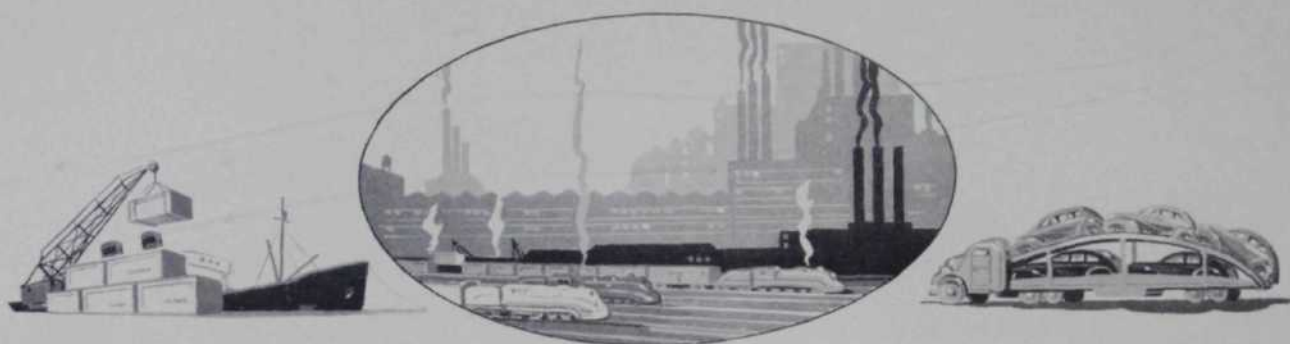


#4 Get fixtures fitted to your job! G-E co-operates with established fixture manufacturers who make over 150 tested, certified, guaranteed fixtures, built to MAZDA lamp makers' specifications and approved by Electrical Testing Laboratories. Look for Fleur-O-Lier or RLM label...at G-E lamp distributors everywhere.



G-E MAZDA LAMPS
GENERAL ELECTRIC

#5 Yes! The lamp is the heart of any fluorescent installation. That's what makes the light, and that's why it's important to look for the General Electric monogram on the lamp! It's your assurance of more and more light for your money! See your G-E lamp supplier, or write General Electric Co., Nela Park, Cleveland, Ohio.



PREMIUM PAID \$25,000 LOSS SUSTAINED \$2,000,000

To a corporation president dealing in contracts running into six or seven figures, a few insurance contracts—with aggregate premiums of \$25,000—may seem small in comparison with matters which normally come to his attention.

But if a ship is sunk or a train wrecked or a factory burned—if employees are killed in an accident—those policies suddenly become the only security for reimbursement of losses amounting to hundreds of thousands—even millions—of dollars.

The fact is that a corporation's insurance contracts are among its most important assets. The best way to give them the attention they deserve is to have them negotiated and bought through an insurance broker—a *buyer* who represents the insured and no one else. The insurance broker knows the entire market;

he is free to buy from the company or companies best suited to each case. He negotiates contracts at the lowest cost, with coverage to meet particular requirements. He co-ordinates a complicated insurance program, takes charge of claim collections, and performs a multitude of other useful services. And his compensation is not an extra fee from the insured, as the seller—the insurer—pays the brokerage.

This is only the beginning of the story of insurance brokerage. After nearly a century of individual service—to clients in various industries—Johnson & Higgins are qualified to analyze your needs. An experienced representative will call upon request, to discuss insurance in terms of your own business.

* * *

The best brokerage service is yours to command—at no additional cost.

JOHNSON & HIGGINS

Established 1845

INSURANCE BROKERS

63 WALL STREET • NEW YORK

Buyers of Insurance for Commerce and Industry

PHILADELPHIA

BUFFALO

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DETROIT

HAVANA

SAN FRANCISCO

SEATTLE

LOS ANGELES

MONTREAL

VANCOUVER

WINNIPEG

LARGEST IN THE BUSINESS FIELD
359,171 A.B.C.

NATION'S BUSINESS

**Chamber of Commerce of
the United States**

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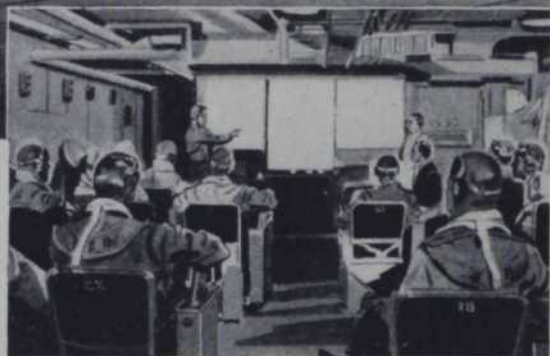
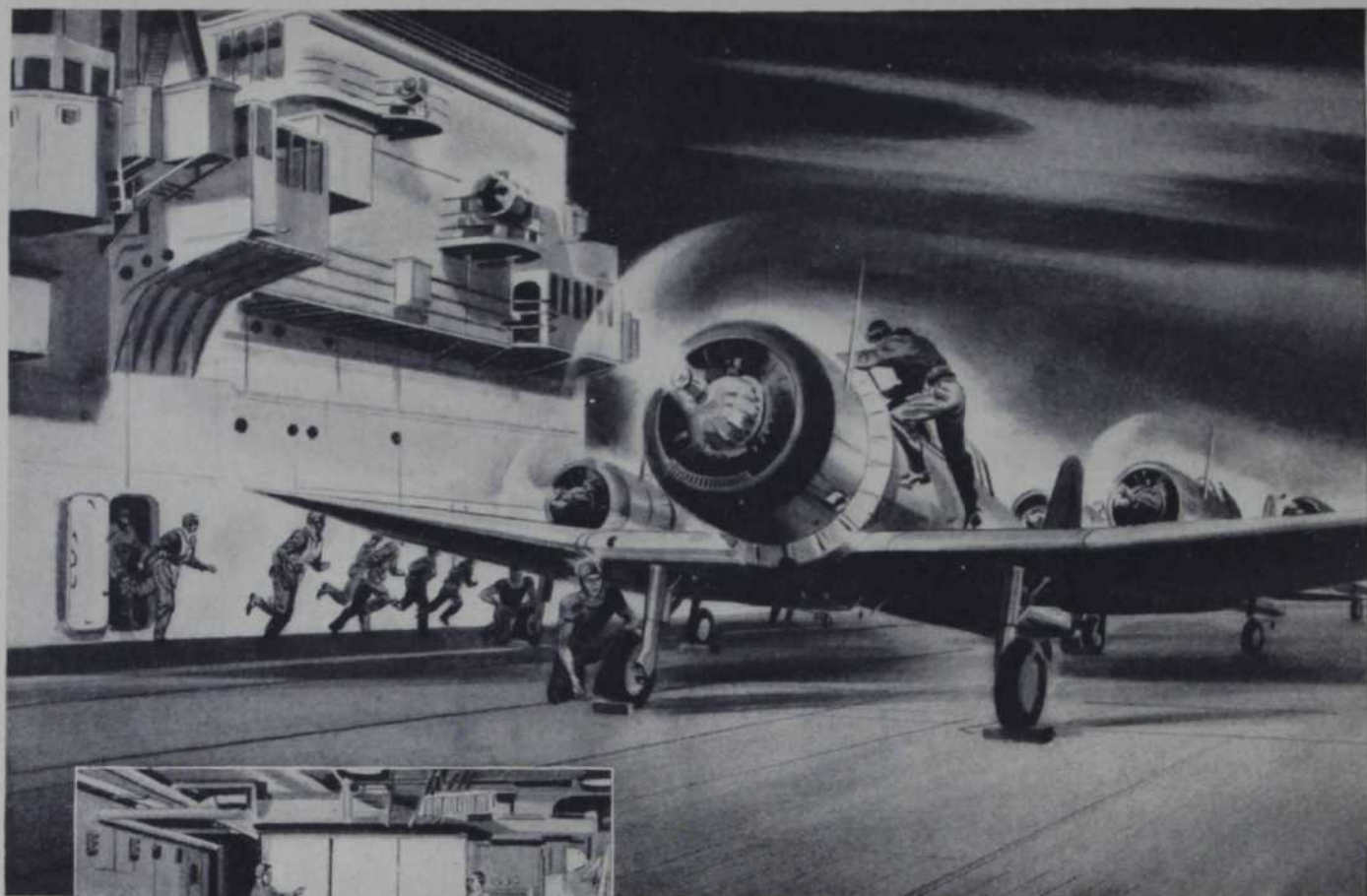
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"Pilots, Man Your Planes!"

Reveille sounds for the Dawn Patrol at 3:45! Every succeeding moment from then to the command that sends these pilots dashing across the flight deck of the U.S.S. Enterprise from the ready room to their planes is planned to build up a spirit of keen daring and cool confidence, the unquenchable will-to-win over sea and air and the unknown enemy over the rim of the ocean.

And in this pre-flight regimen, York air conditioning* plays an important part in keeping the ready room comfortably cool for the bundled-up flyers. For it is here the pilots assemble after their scrambled eggs and toast and coffee and after pulling on their heavy, fleece-lined leather flying suits and helmets. Here they sit in rows like boys at school to hear final

instructions, weather reports, and to wait for the loud speaker to blare forth the order from the bridge: "Pilots, man your planes!"

In the "old days" the ready room was a sweat box for men dressed for the bitter cold of the upper air. But, nowadays the perspiration no longer trickles down their spines or beads their brows. Comfort in these tense periods of waiting means much to health and efficiency... to the very defense of America.

York Ice Machinery Corporation, York, Pennsylvania.

*York air conditioning contributes likewise to the efficiency of other aircraft carriers now in service, the U.S.S. Lexington, Saratoga, Yorktown, Hornet, and eleven other carriers now building.



YORK REFRIGERATION AND AIR CONDITIONING

"Headquarters for Mechanical Cooling Since 1885"

A FEW OF THE MANY NATIONALLY-KNOWN USERS OF YORK EQUIPMENT—American Air Lines • Armour • Bethlehem Shipbuilding • Borden Canada Dry • Coca-Cola • Curtiss-Wright • du Pont • Eastman Kodak • First National Stores • Firestone • Ford • General Baking General Foods • General Motors • Goodrich • Jones & Laughlin Steel • Montgomery Ward • Pabst Brewing • Procter & Gamble Republic Steel • Sears Roebuck • Shell Oil • Swift • Texas Company • United Fruit • U. S. Army • U. S. Navy • Woolworth

Still true

AN Association for political, commercial or manufacturing purposes . . . is a powerful and enlightened member of the community, which cannot be disposed of at pleasure, or oppressed without remonstrance; and which, by defending its own rights against the encroachments of the Government, saves the common liberties of the country.—De Tocqueville (*Democracy in America*) 1840

When they come back

THE MAN who serviced our automobile a year and a half ago dropped in over the holidays. He is a corporal in one of our armies, attached to a mechanized division.

"I don't know about the rest of it, but the Army I am in is a great Army."

"What do you do for the Army?"

"Same thing I did here in Washington. I service automobiles, only they are tanks, jeeps, trucks. And only I get 35 bucks a month."

"How's your equipment?"

"Swell. Tanks from Chrysler, trucks from G.M. and White Motors, jeeps from Ford, Bantam, Plymouth."

"Where are you going?"

"Maybe Africa. Maybe Siberia. But it's all the same—it's just the automobile business. Cold one place, hot another."

"What are you doing up here?"

"I am home on furlough and I am keeping in touch with some of my old customers so they'll come around when I get back."

What more do we want than the adaptability of worker and manager to any job where they can call their skill into play? Men who have been used all their lives to bossing horsepower around have an edge over all the conscript armies of the rest of the world. Resourcefulness and ingenuity are, like the air they breathe, taken for granted.

One thing we owe them over and above their incessant need for the tools of war. They are coming back and they will expect more than old customers—they will expect the opportunity to go back to work, to use again the skill and enterprise with which they were raised.

They are not looking for a new America. The rules of the business game as they knew it are taken for granted. The very fact that they are taken for granted is a warning to any who believe that under the guise of war emergencies, a new way of life must be settled on America.

Labor troubles for apples

FARMERS in the Yakima Valley, Washington, section, famous for ap-

THROUGH THE *Editor's Specs*

ple growing, probably felt they were far removed from any connection with the closed shop issue, if they ever thought of it at all. When the walking delegate of the apple knockers union appeared and demanded a closed shop for apple growers, they thanked him and said they were not interested. They would go along, as they always had, gathering and packing their own apples with the help of wives, children and neighbors.

Thus the apples were picked, packed and shipped to Chicago and other markets, where the Teamsters Union refused to handle the apples, refused to permit them to be handled.

There they rotted because the Union claimed the apple growers were unfair to organized labor because they refused to grant a closed shop to migratory workers.

While the apples were rotting and the Teamsters Union was refusing to permit them to be handled, the little fruit growers of Yakima Valley made up a purse and sent a representative to Washington to see if something could be saved from a year of work and expense. He went to see Sidney Hillman, who said to him:

"We do not have anything to do with apples."

He went to the Department of Agriculture, and was sent somewhere else. Finally he went to the Department of Justice where he was told:

"Unless we can get some kind of a law, there is nothing we can do about it."

He read in the papers that industry and labor had agreed to cooperate for the duration of the emergency and no labor legislation would be permitted. Christmas was over, the apples were rotten, a year of labor was lost. So he went home.

There is no peace

BREATHES there a city man with soul so dead that he has never dreamed of an escape from the crowd and the froth of urban life? Enshrined among the idyls that a man talks about in his intimate moments you will generally find an illusion of some far away retreat where the sun shines perpetually and he can idle

away his days till the sun finally sets.

To Americans seeking to get entirely away from it all, and as Thoreau said, "to front reality," the South Seas have long appealed. There, on the beach in some distant tropical island, might be found the peace that passeth all understanding. To that world voyaged Robert Louis Stevenson to bide a while before he died. In the same realm of beauty more recently went Charles Nordhoff and James Norman Hall. In Tahiti's bowers they wrote of shipwrecked mariners and the "Mutiny on the Bounty."

But even this last and, for most of us, inaccessible illusion of peace and rest fades now into the limbo of things that were. Today the great war birds of embattled powers sail over many of those remote isles, perhaps to dip down through shimmering heat waves and lay their black, satanic eggs. Dreamers on coral strands in the Solomon Islands are more uneasy than commuters in Chicago. Philosophic rebels who ran away from Pittsburgh to moor their barks on some shore in New Hebrides are now digging air raid shelters. There is no escape but in the recesses of the mind.

Everlasting peace

NOMINATED for the most optimistic line of the month:

And those last 10,000 planes (needed to win the war)—they will be the last that take to the air in anger.—From an advertisement by Gimbel's Store in New York.

Treading on sensitive toes

SENATOR La Follette is a minority of one in opposing the recommendations of the Byrd Committee for a reduction of \$1,301,000,000 in federal expenditures for civilian purposes. The eight Democrats and three Republicans on the committee concurred. Only the Wisconsin Progressive dissented.

But the La Follette minority is far more formidable than this 11 to one ratio would indicate. On his side are all the planners in Washington who support the philosophy of spending for spending's sake. Ardently lined up with him are all the officials in all the



300 BRAIN POWER

Some 300 or more skilled engineers and designers have worked weeks, months, in some cases years before the Bullard Vertical Turret Lathe took its present form on which this war worker is turning out an airplane engine part.

Because these engineers and designers have done their work so well, Bullard is able to turn out thousands of Mult-Au-Matics and Vertical Turret Lathes today — machines whose speed and sustained accuracy are raising war production to a pitch undreamed of anywhere else in the world.

Because the first duty of every Bullard engineer is to demand perfection, hundreds of plants know that Bullard machine tools are better today than ever before — and that future Bullard machine tools will be better than today's.

THE BULLARD COMPANY
BRIDGEPORT CONNECTICUT

BULLARD

bureaus whose activities would be restricted by taking some of their funds and using them to make machine guns and tanks.

You can legislate out of existence jobs in private industry and the protests of those affected are faint and far away like voices crying in a wilderness. But talk of economy that restricts the future of a group of ambitious officials and see how vocal they grow.

Again, those surpluses

AMONG other counts, Senator La Follette objects to the Byrd Committee's classification of the Surplus Marketing Administration as a non-essential activity that could be made to yield a saving of \$100,000,000.

Spare that social sapling, pleads the Senator—for two reasons. First, it will alleviate the "shocking" prevalence of malnutrition in this country. Second, while lend-lease buying has bolstered prices and stimulated demand for most farm products, it has not done so with all of them.

The Senator's fears of malnutrition should be set at rest by official reports here and in England that public health was never so good. As to "stabilized" prices on everything that farmers may choose to produce, that is surely a visionary hope. Scarcities of most agricultural items, with relatively high prices, and surpluses of a few on which prices are low means just one thing—that times demand the farmers should divert production from the latter to the former. How else can scarcities be adjusted and our needs satisfied?

If anybody is interested

SENATOR BYRD'S Committee confined itself to suggesting dispensing with useless expenditures by abolishing obviously useless agencies. Later on the Committee is expected to get around to investigating conflicting, duplicating and retarding agencies, all more or less engaged in doing the same thing at the same time at the same place, each completely staffed for the emergency.

For example, constructing housing units are: Public Building Administration; U. S. Housing Authority; Division of Defense Housing; Mutual Ownership Defense Housing Division; Navy Department; Farm Security Administration; Alley Dwelling Authority; War Department; and Tennessee Valley Authority. The Division of Defense Housing has 11 local authorities, and the U. S. Housing Authority 73, a total of 93 governmental agencies, at last count, looking after the housing problem. Situations such as this probably caused a typically unimaginative Government official to

explain that "it is almost impossible to get anything done on account of the emergency."

Industrial note

THOMAS G. CORCORAN, former R.F.C. employee and White House entertainer, tells the Truman Committee that he is the victim of the tradition that, if a man build a better mouse trap than his neighbors, the world will make a beaten path to his door. Mr. Corcoran says he accepts no lobbying fee less than \$5,000, has no name on his office door, turns down more clients than he accepts and admits he received \$100,000 in cash fees and an undetermined amount of stock in defense industry in the course of 1941. Months ago, Mr. Jesse Jones, with characteristic frankness, said he could recall no service Mr. Corcoran performed for the R.F.C., nor did he attempt to explain why Mr. Corcoran was on the pay roll at \$10,000 a year. It is made clear at last what Mr. Corcoran was doing besides entertaining with mandolin and Irish folk songs.

He was building mouse traps in governmental departments.

Helpful hint

A FRIEND sends us a useful gadget called an Instantaneous Decision Determinator. It is an arrow which is whirled around on a cardboard circle by the flick of a finger nail. When it comes to rest it must point to one of four choices: "Yes," "No," "Do" and "Don't."

It guarantees impartiality. No question is ever given a hedging answer. Gnawing doubt of the wisdom of any decision no longer troubles us.

It is of incalculable value in running a household where the family so seldom agrees on what movie, which fish for dinner, or who shall have the car tonight and add more miles to those thinning tires.

So well has it worked that already there has come to mind a test supreme. Could it, might it even give an answer to the question "Shall we bother to make out an Income Tax Return this year?"

We have till March 15 to think it over. Of course we could flick the Determinator to find out if the question should even be considered.

Beginning and end

THE NEXT war may well start in the air but in all probability will wind up, as the last war did, in the mud. —Dwight Morrow in 1925.

C'est la guerre

IF ALL the reports and trial balloons and scare-heads emanating from offi-

GOOD BUSINESS NEWS

\$611,000 COLLATERAL

Back of a \$2,000 Loan

WHY



a Wealthy and Prospering Company Borrows Money it DOESN'T NEED!

A LITTLE over three years ago, The Glassburg Metal Goods Co.* ended its fiscal year with a net loss of \$272,675 on \$5,429,169 net sales.

Despite the fact that it could show a net worth of \$2,663,347, the Company's cash position was precarious. It couldn't take discounts on purchases. It couldn't buy supplies in large enough quantities to get advantageous prices.

Though its merchandise was in good demand, it couldn't increase production or expand sales because it couldn't finance additional business.

Its credit with two local banks was limited, because the resources of the banks were limited, and large, out-of-town banking connections were unwilling to extend the necessary lines.

So the company turned to us for financing. Our service was just what

it needed. Within twenty-four hours, we had made an advance of more than twice what the company had tried, but failed, to get from its banks.

Today, with net worth of more than \$3,000,000 and working capital of nearly \$1,000,000, the company continues to make use of Commercial Credit OPEN ACCOUNT Financing.

On the basis of current collateral, consisting of receivables and inventory assigned to Commercial Credit Company, it could obtain more than \$600,000 on request.

Of this potential credit, it actually uses and pays charges on only \$2,000, because, in the words of the president, "we want to keep our connection with Commercial Credit Company on a permanent basis, so that if the time ever comes when we need a substantial sum in a hurry, we can get it without red-tape or delay."

* * * * *

For the complete details of this remarkable experience in modern business financing, send for the booklet "ANCHOR TO WINDWARD." Address Dept. 1401.

*A fictitious name, but the facts and figures, taken from our files, can be verified.

COMMERCIAL CREDIT COMPANY

"Non-Notification" Open Account Financing

BALTIMORE

BOSTON NEW YORK CHICAGO SAN FRANCISCO LOS ANGELES PORTLAND, ORE.

CAPITAL AND SURPLUS MORE THAN \$60,000,000

Helping make America strong



HIGHER, FASTER, FARTHER!

RIGHT NOW IT IS GOOD TO KNOW OUR AVIATION DESIGNERS ARE AT WORK ON THE GREATEST FIGHTING AIRPLANES THE WORLD HAS EVER SEEN. WORKING SIDE BY SIDE WITH THEM ON THE GASOLINE AND LUBRICATION PROBLEMS OF THESE NEW PLANES ARE THE RESEARCH MEN OF THE OIL INDUSTRY. IN THE TEXAS COMPANY ALONE ARE MORE THAN 1000 SKILLED SCIENTISTS AND TECHNICIANS --- WORKING AND PLANNING --- HELPING MAKE AMERICA STRONG.

OAT HULLS HELP MAKE BETTER OIL!

TEXACO SCIENTISTS FOUND THAT FURFURAL, AN AMAZING CHEMICAL DERIVED FROM OAT HULLS, POSSESSES A REMARKABLE ABILITY TO PURIFY OIL. MOTOR OILS MADE BY THIS TEXACO "FURFURAL PROCESS" NOT ONLY LUBRICATE BETTER BUT LAST LONGER IN SERVICE.



FROM THIS TIRELESS RESEARCH

FOR BETTER PETROLEUM PRODUCTS COMES THE HIGH QUALITY OF TEXACO *Sky Chief* AND *FIRE-CHIEF* GASOLINES, INSULATED *HAVOLINE* AND TEXACO MOTOR OILS, AND *MARFAK*. MORE THAN 45,000 TEXACO DEALERS OFFER THEIR SKILLED SERVICES TO HELP MAKE YOUR CAR LAST LONGER.

THE TEXAS COMPANY
Serving the Nation in all 48 States

For Your Enjoyment... 2 Great Radio Programs
FRED ALLEN On the air every Wednesday night
METROPOLITAN OPERA Complete broadcasts of great operas every Sat. afternoon
See your local newspaper for times and stations



cial sources in Washington are true—

You may go home some evening and find that government agents have jacked up your car and taken the tires for an air-raid warden's use.

Or you may be notified any time now to bring your family coach down to the War Department or the federal building and have it commandeered bodily.

You must be prepared for an official communication notifying you to appear on a certain date and hour in Bridgeport or San Diego or some point between, for assignment to munitions factory work.

If you live in the District of Columbia and none of your family work for the Government you may be asked to move to some other locality.

If you wear a corset, better save it for special occasions, because you may not be able to get a new one for a while.

Don't be surprised if an additional 15 per cent is deducted from your pay envelope as a forced loan to the Government.

Note on morale

FROM WISCONSIN comes a letter about the plight of those farmers in the Sauk-Prairie-Merrimac area, whose land the Government is about to take over for a projected powder plant. These men say that the amounts proposed as recompense for their farms is only from two-thirds to three-fourths the prices they paid for the land, with nothing for improvements they have made, and no allowance for the time lost in settling elsewhere.

When they protested to the government negotiator, he is reported to have said:

Your standard of living is too high. You people don't need furnaces or plumbing. Get a heater, warm your stomach and then turn around and warm your back.

This point of view, unfortunately, is all too general on the part of some officials. The sadistic attitude in Washington is that the way to win the war is to start making somebody suffer at home.

"We've got to take the materials for this war out of our hides somewhere," they say.

There is an uneasy menace about this sort of talk for one thing. In another way it is bad psychology in a nation at war. Any salesman knows that, when you are trying to induce people to do something, the right approach is to talk about what they will get by so doing, not what they will pay.

Miles of dimes

EVERY boy and girl in the schools of Topeka, Kan., Sioux Falls, S.D., and Ottumwa, Ia., will receive a booklet with one ten-cent war savings stamp pasted up, the gift of Henry T. Foster, president of John Morrell & Co., the well known packing firm. It is an idea

that we hope to hear more about in other sections. If it generates the thrift habit in children, a secondary purpose as important ultimately as the primary will have been served.

Westward ho!

AMERICANS have been poring eagerly over their maps of the Pacific and the Orient, burnishing their knowledge of a geography that has rusted since school days. They are learning to distinguish between Malacca and Molucca Straits, rediscovering a Batavia that is not anywhere near Buffalo, tracing the way to Mandalay, wondering what "Kuala" means as a prefix to the names of Malayan towns, trying to pronounce Nagor Sridharmaraj. (Na-gor' Sre-dar-mu-raj'.)

Those who looked further discovered that Japan, which we Americans have always associated with the diminutive in every respect, is an empire with more than 100,000,000 people, or about four-fifths as large as the United States in population. But they found, too, that the bottom of the ocean off Japan is six miles down, the deepest watery chasm on the globe, and a suitable tomb for the Nipponese fleet.

More priority casualties

THE OFFICE of Price Administration has decided that hearses are not among the "essential" vehicles entitled to new tires.

Makers of poultry feed are forced to cut their Vitamin A potency from 3,000 to as low as 1,000 units.

Men's clothing manufacturers consider elimination of "spare" trousers with suits, also of vests with double-breasted coats and of trousers cuffs.

When tax cows dry up

IF MOTORISTS are forced by government restrictions to intern their cars, some curious effects are likely to follow.

One will be a scramble by the states to find substitute sources of tax revenue. A heavy shrinkage in auto licenses and gasoline taxes would upset many a state budget. In New York, where the "take" from this source is more than \$100,000,000 a year, Governor Lehman has predicted a "tremendous" drop in revenue that may doom the Empire State's surplus.

Hardest hit will be some of the southern states with gasoline taxes up to eight or nine cents a gallon. This tax was originally supposed to be used for road maintenance only, but many states have reached deeper and deeper into the motorist's pocket and diverted the returns into the general funds.

Better Light for More Efficiency for Quicker Victory!

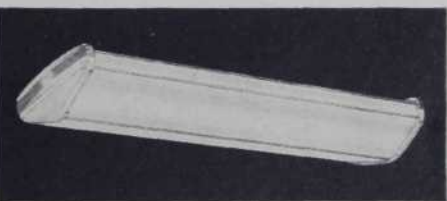


**Guth FLUORESCENT
LIGHTING**

Increases Office Efficiency 15%!

The picture above shows a typical Guth Fluorescent Installation in a typical American office (name on request). Of their new lighting, the company's president says, "Efficiency of office workers has increased 15%; and we are now receiving applications for work from the very best help in town, the strongest attraction being the comfortable working conditions."

In these days of extra stress, every factor that contributes to greater efficiency and morale is highly important. Write for information about the use of GUTH Fluorescent in your business. Our experience in serving the cause of defense is highly valuable to you!



GUTH EXCELUX, typical of the engineered superiority and artistic design of all GUTH Fluorescent Fixtures.



The EDWIN F. GUTH CO. • 2615 Washington Ave., St. Louis, Mo.

How the Greatest Name in Rubber became a Great Name in Aviation

TODAY Goodyear is one of the nation's foremost builders of light metal-alloy subassemblies and parts for the mighty new air fleets that will win victory for America.

How Goodyear comes to be building them is a story of unswerving faith in the future of aerial transportation that goes back to the dawn of aviation.



It begins with our development of the first practical airplane tire in 1909. Then airplanes were still using primitive undergear—sled-runner skids, or bicycle tires that often burst and ripped off under landing impacts.

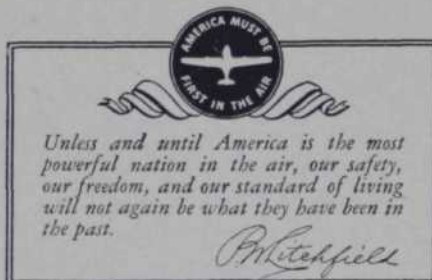
The new Goodyear "Aeroplane" tire made take-offs and landings so much easier and safer, many airplanes were using it by 1910.

Next we learned that aviators were complaining about wing coverings. The varnished canvas then used stretched and flapped in flight, retarding speed.

Our solution was the development of a stretchless rubberized fabric, so tight-fitting it added 5% to an airplane's speed. At the 1911 Chicago Aero Meet nine out of ten planes had Goodyear-covered wings.

This success led us to build a giant 80,000 cubic foot racing balloon of similar fabric—the famous Goodyear 1. In 1913 it won the Paris International Balloon Race and brought the James Gordon Bennett Cup back to the United States.

So when the World War came, both the Army and Navy turned to us for lighter-than-air patrol and observation craft. More than 40 non-rigid airships



or "blimps," and upwards of 800 "sausage" balloons were delivered to the U. S. forces.



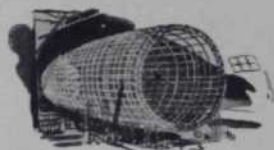
Shortly after the armistice Goodyear completed development of the first rubber-covered, bullet-puncture-sealing gasoline tank for airplanes.

During this period airplanes were becoming larger, faster and heavier. Smooth, safe landings became difficult on hard, high-pressure tires. Goodyear met this with the low-pressure type Airwheel that has since revolutionized all tire design.



In 1928, when the Navy decided to build two giant rigid airships, they naturally turned to Goodyear as the nation's most experienced builder of airships. In constructing these great ships—the largest aircraft ever built in

America—we faced the problem of obtaining stronger duralumin alloys than this country had ever produced.



As a result of Goodyear's efforts to secure stronger, lighter alloys for airship fabrication, America today produces alloys for airplanes far superior to any known twenty years ago.

During the thirties we developed featherweight magnesium-alloy wheels for transport airplanes, and hydraulic disc brakes that pack tremendous stopping power in small compass.

Today Goodyear's great aircraft parts factories are producing complete all-metal wing and tail assemblies, nacelles, floats, ailerons, cabin structures, bullet-puncture-sealing gasoline tanks, wheels and brakes—in ever-growing torrent.

Upon this work we are devoting all the aeronautical experience and skill acquired in thirty years of pioneering, in full realization that our liberty is not secure until America commands the air.



Airwheel—T.M. The Goodyear Tire & Rubber Company

An American Resource in Jeopardy

CITIZENS ARE vaguely aware of a momentous decision recently reached in Washington. Labor leaders demanded an equal voice in the management of the automotive industry. After long hours of discussion, with the result touch-and-go, it was decided to leave the direction in the hands of those who had made this industry outstanding by any test anywhere any time in the world's history. But it is only a breathing spell.

A great music hall. A symphony orchestra. Members tuning up. Brasses, strings and woods. Each an expert, yet a welter of dissonant sounds, contesting the hum of anticipation in the audience.

A man steps from the wings. He bows, faces the musicians and signals for attention. He glances at the score, the "plan" of the production.

A great symphony unfolds. The varying contribution of 50 men, skillfully coordinated by a Stokowski or Toscanini, are brought to focus on a singleness of purpose, preconceived.

So important is this leader that we, recognizing his particular and unusual talent and training, honor him. He is called a conductor in the field of music; his counterpart in industry is called a manager.

As great an asset as our natural resources are the men who "manage" to bring them into use.

Where do managers come from? They are recruited from farm and assembly line and mine and school-room, pulpit, bar and press. The process of selection is the soul of democracy. Anyone can become a manager of an enterprise if he has in him all the qualities it takes. Nor do managers become a "vested interest." Each day, and indeed each minute of the 365 days of the year, citizens vote them in or out by choosing or refusing their products. You and I and the other customers of the land can relegate the management of General Motors, Food, Mills or Baking to footnotes in business history by withholding our votes of approval.

Management in American industry is not a gadget. It is as necessary as money, men and materials. When soloists are brought together to do their part of an overture in unison, there must be a director.

Those who would supplant management with

something new, be it under the euphonious name of industrial council, or political commission, fail to appreciate the complexity of our industrial organization. Even the most starry-eyed reformer would hesitate, let us hope, to supplant an orchestra leader during a performance, a surgeon during an operation; or a military expert during a battle. Yet this very thing was demanded in the automobile industry.

"Industrial Councils" will be only the intermediate step. The dictators of Europe, whose practices we profess to abhor, utilized "labor fronts" of their own making, to take over complete control of industry, men, management, plant.

Let those who boast of America understand management's contribution to our well-being, and consider well the proposed substitution of labor or politics. It is well to remember that management's power is not a power to impose fines and penalties, but rather a God-given talent to initiate, to animate, to develop, to assign tasks at which the worker is most apt, to inspire, to interpret policies and create team-play, to select and appraise and nourish the hidden values in the human equation.

We are fighting against a concept of life alien to America. Those who would defeat us hate our emphasis upon rights and opportunities for the individual. To them, the individual lives for the State.

To win the war will be to lose it if we destroy the way of life which has made it possible for men and women of managerial talent to function in the interest of the rest of us.

The spirit of American management is too valuable an asset in winning the war and to society in peace-time not to be encouraged. There could be no greater national folly in this critical period than to foreshorten its full reach.

To defend management today is to protect those who will be the managers of tomorrow. When they return from the wars, let them find the America they went to save.

Merce Thompson



Geared to the *GO* of America!

AMERICA . . . born as thirteen little colonies huddled on the shore of a wilderness. Born with a dream in its heart . . . and a voice at its ear saying, "It's yours—go get it!"

Young America . . . pushing the wilderness aside like a curtain—and earning itself a continent.

Older America . . . eating up distance to the tune of wheels humming along steel rails. For the railroads helped build

America. And they'll help *keep* America for us today!

One of these is Chesapeake and Ohio—a railroad that changed an Indian trail into a great artery of commerce . . . that helped join the East and the West, to keep ours a continent ruled by one people. Through wars and peace, through rich years and lean, Chesapeake and Ohio Lines have grown with the resistless "Go!" of America . . . sharing the

dream, the struggle, the achievement.

As a deep-rooted part of our country, this railroad today faces an armed challenge to America's liberty. And we face it *well prepared!*

For years now, Chesapeake and Ohio Lines have been building a greater railroad . . . keeping it tuned up to the pitch of perfection . . . *ready in advance* for any service America shall need . . . now and always "Geared to the GO of America!"



CHESAPEAKE AND OHIO LINES

Geared to the GO of America

Serving WASHINGTON • NORFOLK • NEWPORT NEWS • RICHMOND • VA. HOT SPRINGS • WHITE SULPHUR SPRINGS
CHARLESTON • HUNTINGTON • ASHLAND • LEXINGTON • LOUISVILLE • CINCINNATI • COLUMBUS • TOLEDO • CHICAGO

The Machines Behind the Guns

By PAUL McCREA

A MODERN heavy machine gun fires at the rate of 500 rounds a minute.

A light machine gun fires 500 to 1,200.

The Army's new Garand rifle could do 800.

A "Tommy" gun lets go at the rate of 400 to 800.

The Bren, 450.

That worried defense officials. In mechanized war, it is not enough to keep your powder dry. You have to load it into cartridges faster than your army can blast it out. In eight or ten years a nation might accumulate enough. We didn't have eight or ten years.

So, some 18 months ago, the problem was turned over to the Waterbury-Farrell Foundry & Machine Co.

Could they fill shells faster than a modern army could empty them?

Waterbury-Farrell, already knee deep in defense orders, got in touch with the Package Machinery Co.

"Can you people build a shell loader?"

Package Machinery specializes in making equipment to wrap chewing gum, tobacco, candy bars and soap. Their most warlike gesture had been manufacture of lathes which turned out gun barrels in the first World War. Cartridge loading involves seven complicated operations. Skilled mechanics were scarce and getting scarcer. Jigs and fixtures were needed. So were new tools.

However!

Package Machinery went to work. At the end of two



ROBERTS

months they had retooled the plant. At the end of four they had made three heavy loaders. They paused long enough to retool once more. Then they produced ten a month. Production kinks showed up and were licked as encountered.

Now they make 33 a month.

These intricate machines weigh 4,500 pounds, they load either .30 or .50 caliber ammunition, turning out 45

to 60 cartridges a minute, depending on the size. They do practically everything but aim the bullet at the enemy: dents are removed from shell cases, over- or under-filled cartridges are rejected; the bullet is clamped in, the height of the completed cartridge measured and special bullets—like tracers—are painted for identification.

Now the company has started work, on its own initiative, on a new hopper feed for .30 caliber ammunition, an automatic clip loader and a box loader for cartridges.

Meanwhile, in Chicago, the Clearing Machine Corporation, builders of power presses, started from scratch to design a machine that would make 75 mm. shell cases. About the time the thing was completed, the 75 was dropped. Ninety millimeter shells were needed. So they changed the machine. Now it turns out 300 shell cases an hour. Seven or eight an hour used to be good time.

People who read "Jap Bomber Shot Down" will



LAWSON STUDIOS

We needed cartridges in a hurry. Experts in making packaging machinery took the job

give little thought to the anonymous machines that fed the victorious guns. But on them and rows of similarly unknown mechanisms depends our hope of victory. If they make good we can fulfill our pledge to serve as "the arsenal of democracy."

If they fail—

But, on their record to date, they will not fail! Operating freely, they built an American way of life that even the whip-lash production of the dictators couldn't equal. They are bringing to the job of war the same efficiency that they gave to the job of peace.

A nation whose soldiers only recently maneuvered with mock cannon and wooden guns, we seemed, a couple of years ago, to have no place in the Donnybrook in which the world had managed to embroil itself. Men with wooden guns may die gallantly but to little purpose.

Yet when we were brutally pushed into it, our men came up holding guns that would really shoot. Back of them waited other men who would march into battle even better armed and from our factories pours a

swelling tide of weapons; enough, not only for us, but for all the decent peoples of the world.

That betokens a miracle.

But it isn't.

Unless the Constitution and the Bill of Rights were a miracle. Unless a nation which leaves men free to work, and plan, and rise as high as God gave them intelligence to rise is a miracle.

Unless it is a miracle that men suckled in such an environment are willing to sweat and strain and go sleepless to protect such a heritage.

If these things make a miracle, then we have one. A miracle of brains, ability and perseverance that only free enterprise, government encouraged, could have given any people.

1★ Machines that Make Machines

A complicated job. 1,500 separate parts. The initiate call them "tools." Not screw drivers and pliers. Cranes that move 75 tons. We led the world—in peace. What is a machine tool? Making hay in hard times. A decade of progress. Records and more records.

MODERN war is a war of machines—tanks, trucks, airplanes, battleships, all designed to get men and weapons to the point of impact more effectively than the enemy can get them there. When our defense program—now our war program—began, we had few of these things. We needed a lot of them in a hurry.

It was a complicated job.

"A 40-millimeter gun mount is made up of 1,500 separate parts," says Brig. Gen. Charles T. Harris, Assistant Chief of Ordnance, U. S. Army, "many of which are built to closer tolerances than a fine watch."

There are 600 parts in an Oerlikon anti-aircraft gun; 8,000 in an airplane engine; more than 9,000 in a Bell Airacobra; 11,500 in a bomber nose and fuselage; 500 in a Bofors gun; 1,400 in an airplane propeller.

Nobody knows how long it would take to make those by hand. The only way to make them quickly is to use machines. The initiate call them "tools." So, when we determined to arm ourselves against the bully nations, our first need was tools.

We needed them in terrific numbers—375 for the Westinghouse Naval Ordnance plant at Louisville; 1,000 at Hudson's new ordnance plant; 1,200 for Thompson Product's new Cleveland plant; almost 3,000 for the Wright Aeronautical Corporation's new Cincinnati factory; 9,000 of one kind or another for Chrysler's tank factory.

That didn't mean screw drivers and pliers. It meant monstrous cranes capable of moving 75 tons; hundred ton boring mills with tables 40 feet in diameter. It meant needles for sewing machines used in gas mask manufacture, delicate precision tools, welding outfits—equipment for making 4,000 pound armor plate castings—and tiny springs.

Before we could make weapons we had to build those machines. Frequently, before we could build them, they had to be designed.

That was where the Miracle of America came in. Ours has long been a machine economy. Though backward in the making of guns, and bombs, and tanks, we led the world in making refrigerators, washing machines, vacuum cleaners and automobiles. Men who had been making those things knew how to use machines. Other men knew how to build them.

Many of these men were concentrated among the firms which make machine tools. Those firms constitute a comparatively small industry. There are about 250 of them with a total normal investment of some \$150,000,000, somewhat less than the cost of two battleships. They employ normally 40,000 to 50,000 men. General Electric alone employs more.

But, although the public seldom sees their products, those companies built the tools which fashioned our American way of life. All machines which make machines are not necessarily machine tools although close

examination will probably reveal a machine tool lurking somewhere in the background.

Technically, a machine tool is "a power-driven, complete metal-working machine, not portable by hand, having one or more tool or work-holding devices and used for progressively removing metal in the form of chips."

A steam hammer is, therefore, not a machine tool although machine tools were used in building it. The same applies to presses, metal shears, forging and stamping machines. They do not remove metal in the form of chips.

This leaves, roughly, five classifications of machine tools:

Milling machines which remove metal by means of a rotating cutter with multiple cutting edges.

Planing machines which remove metal by moving the work back and forth under a stationary cutting tool.

Turning machines which remove metal by rotating the work under a stationary cutting tool.

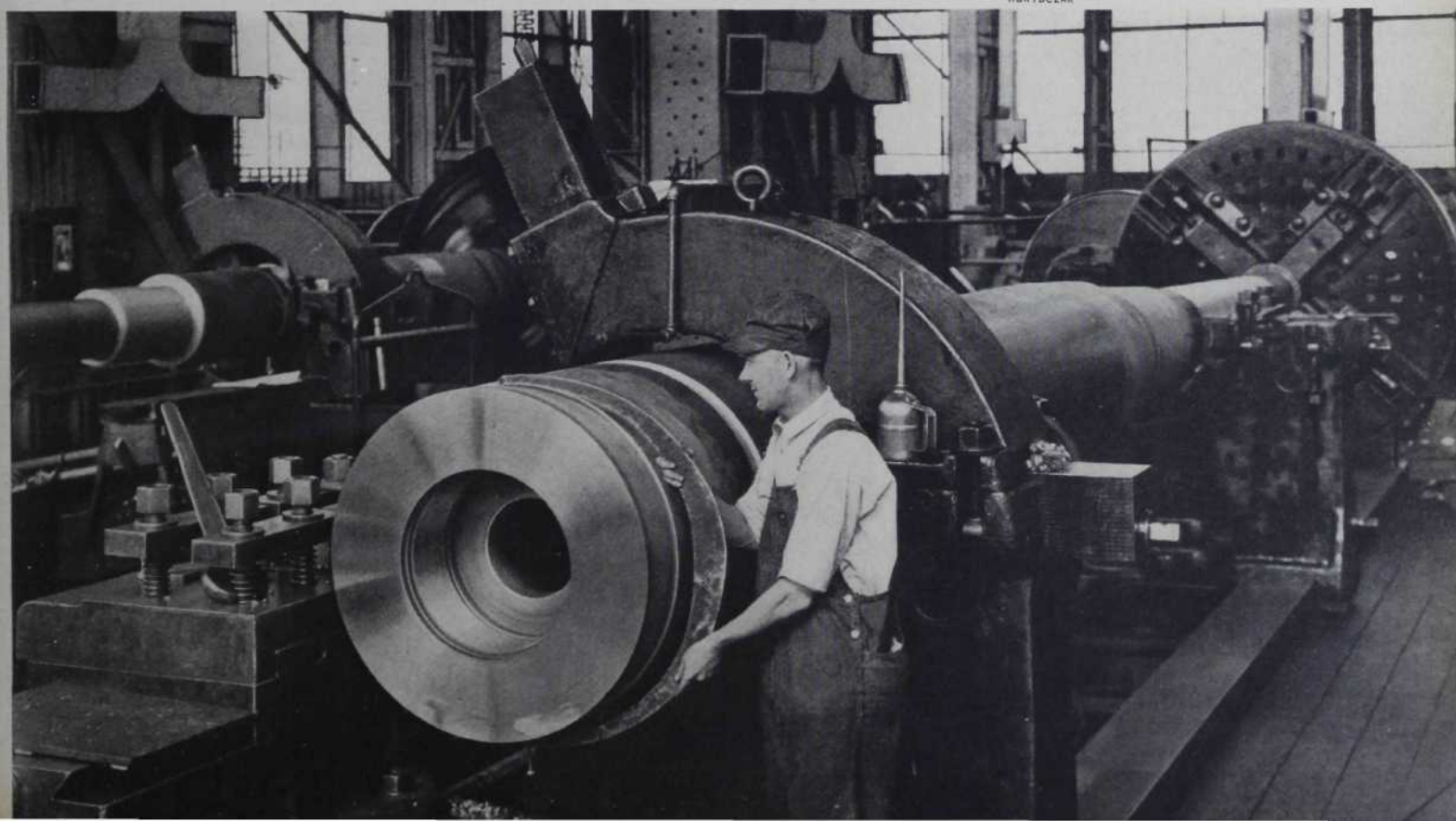
Boring machines which cut holes in metal by means of a rotating cutting tool.

Grinding machines which shape a piece of metal by bringing it into contact with a rotating abrasive wheel.

Mostly the public knows that such things happen just as it knows that Arctic nights are six months long. It is about equally concerned with these two phenomena although some sympathy was expressed for machine tool builders in depression years when they were re-

No one knows how long it would take to make a cannon barrel by hand. Machines are needed but they must first be designed and built

HORYDCZAK





There are 1,500 parts in a gun mount and many of them must be machined to closer tolerances than the parts of a fine watch

ported as one of the "capital goods" industries that was having a hard time.

They were.

In the worst depression year, their orders totalled only about \$22,000,000. Industries needed few new tools to make goods for which they had no customers.

But, to their credit and our comfort, the machine tool men kept their organizations optimistically together. They even employed the time to improve their own plants, experimenting, installing new machines with precision, anti-friction bearings, gears of heat-treated alloy steel, automatic lubrication. They knew they would be needed sometime.

They did not know how dreadfully urgent the need was going to be.

As a result, when the necessity arose, the industry was ready. Its machines, according to George S. Armstrong & Company, engineering firm, were, "measured in terms of productivity, from nine to 14 times more effective than those of 1900—from one-third to one-half greater than those designed as late as 1930."

The industry enjoyed a mild boom in 1937, with \$189,000,000 worth of business. It sank to \$145,000,000 in 1938; grew to \$200,000,000 in 1939 as war orders from the Allies began to come in.

In 1940, it soared to \$450,000,000 and last year production was at the rate of \$765,000,000. This year it expects to turn out tools valued at \$1,000,000,000

which is a lot of tools, although the Government urges even more.

2 ★ A Cranky Customer, Mars

Old tools won't do. One barrel, 70 special machines. From 350 workers to 2,000. A \$600,000 building in five months. "No one knows his capacity." 14 hours become less than two. They couldn't use what they made possible. October delivery in June. A pensioner pulls on overalls. Making "Lightning" like lightning.

THOSE RECORDS were not made by the simple expedient of waiting for orders to come in and then turning them out. They were set in the face of all sorts of obstacles. One was the need for entirely new types of machines. Only a few of the old machine tools used to make peace-time products could be used for war production. The tool builders had to find out just what types of military equipment were needed, then plan and design machine tools that would build that equipment.

For machine guns:

"The barrel alone required some 70 special types of machines," said a Chrysler official, "all of which are practically foreign to automobile manufacture."

Even for standard types of machines, changes were necessary.

"We are making the same machines as in the past," one builder says, "but we have to provide special arrangements that will permit the handling of aircraft cranks and other parts peculiar to the present expansion that are not ordinarily applied to grinding machines."

"No one knows his capacity"

Even had the need been for the usual types of machines, most companies were not equipped to handle the volume of business that was dumped upon them. The Van Norman Machine Tool Company, for instance, increased production from \$100,000 a month in 1939 to \$800,000 a month last year while struggling with the problems involved in expanding floor space 200,000 square feet and employment from 350 to 2,000 workers. It expects to turn out \$1,000,000 worth this month, \$1,200,000 a month by July.

The King Machine Tool Company put up an entirely new 120,000 square foot building, doubling its capacity. The W. F. & John Barnes Company broke ground for a new plant in October, 1940, started work in one wing in January, 1941, the second in February, the third in March. Then it began work on still another building.

The Chambersburg Engineering Company broke ground for a \$600,000 new building December 5, 1940. Production started May 1, 1941.

The Norton Company estimates that it is turning out machines at the rate of five times its estimated capacity—but it isn't sure.

"No one knows what his capacity is," the company says, "until he is doing everything possible with all the means at his disposal."

The fact that machines making weapons must handle materials seldom used in peace—armor plate is one of them—made the job no easier. The tool builders licked that as they went along. The Bullard Company came up with automatic methods that reduced the machine time on certain components of propeller hubs from 14 hours to one and three-quarters.

In their own plant this company streamlined activities to a point where they are turning out four times as much production as they ever did with only 50 per cent more floor space.

Others have similar stories:

"We have now on our rolls, inside and out, more than 9,600 employees," says Henry D. Sharpe of the Brown and Sharpe Co., "have added buildings; a

large amount of new equipment; have filled up corners and are just bulging with work in process."

The Norton Company managed to expand production 300 per cent over its previous peak year without taking time to erect new buildings. Partly that was done by sub-contracting, partly by adopting methods that the company's customers had long used.

Paradoxically, the industry which made assembly-line mass production possible had, until two years ago, seldom been able to use that method itself. Each machine was usually a special job incorporating the customer's individual ideas or necessities.

"Now," says R. P. Anderson of Norton, "practically all of our machines less than ten feet long are mounted on movable platforms and proceed down the production line where various operations are performed by crews of men particularly trained for each operation."

The National Automatic Tool Company has similar plans.

"Changes in design of parts to be machined have, in the past, made special machines undesirable," says Edw. D. Frank, vice president, "and, in addition, production requirements have been limited. However, the picture is changing. At present, designs are being standardized and production is being increased to a



U. S. ARMY SIGNAL CORPS

Only a year or so ago, our soldiers on maneuvers used wooden guns; we had no others

point where we are preparing to meet this demand for specialized high production equipment."

That company has already quadrupled production.

While struggling with this sort of thing in their own plants, they found ways and time to help their customers.

General Electric, setting up new facilities to manufacture turbines and gun mounts, needed boring mills and lathes. They called on the Niles Tool Company, Niles, Ohio.

"We can't promise delivery until October."

It looked like a bottleneck but both companies refused to believe it. Joint investigation showed that some parts for both tools could be machined in General Electric's gun mount division if somebody could be found to supervise the work.

Somebody could. John Hoerner, 75-year-old General Electric pensioner, pulled on his overalls. As parts were finished in the gun mount plant they were sent to Niles for assembly. Delivery date moved forward from October to June.

At Lockheed a workman rides majestically back and forth on a steed called an Extrusion Miller which does in two hours and 20 minutes a job that used to take 90 hours.

The machine was designed by Rudolph Onsrud in

collaboration with plant engineers to handle parts which, because of their length and awkwardness, could not be put on a conventional milling machine. Built by the Onsrud Machine Works, Chicago, it is 30 feet long with a cutting area 12 inches wide and 20 feet in length. It weighs 26,000 pounds, without the rider.

Because of it, three and one-half days production time is saved in turning out the "Lightning" P-28 Interceptor plane.

Another defense monster grew out of Camden Forge Company's need for a 36 foot boring mill. The Company was producing steel turrets on which the big guns of the newest battleships swivel. The rings must be forged because a welded ring might break from the recoil. The Simmons Machine Tool Corporation which ordinarily operates a "mechanical clinic" where obsolete or worn-out tools are rejuvenated, took that on. The job called, among other things, for castings totalling some 370,000 pounds and a main drive gear 24 feet in diameter. They completed the giant in 13 weeks and, while doing it, perfected a new precision method of indexing the cutting of large diameter gears.

But it isn't always the big things that offer the toughest problems. Take cylinder head bolts for Wright Cyclone engines. Although they are only two inches long, they require seven major operations: steel bar

Thousands of hours of tooling were necessary before the first tanks could be built. Now we can turn them out in trainloads

THE QUARTERMASTER CORPS



must be made into bolt blanks; heat treated; shank and shoulder must be ground; head bevelled and finally the thing must be cadmium plated.

Since each motor has 280 of these bolts, installation of an automatic machine for one of these operations alone saves two man-hours per engine.

Or take airplane and automobile valves:

Thompson Products has made them for years but, with the war increasing demand and the company broadening its line to include fuel and booster pumps, time was at a premium. They called in the Jones & Lamson Machine Company. Result, an automatic thread grinder which performs in a minute and a half operations that used to take 20. Since each of a bomber's four engines has 18 valves, that saves 20 hours per bomber.

An automatic four spindle drill press designed for the same company by Leland-Gifford Company increases that saving by reducing machining time 25 per cent.

3 ★ The Miracle of America

Turn backward, Oh, Time. 46 men work a year. Where are those tanks? Stretching metal like rubber. Assembly lines for airplanes. Fighters ride in cradles. 16 planes at once. "Merely good management."

OUR PEOPLE, suddenly gone war-minded, overlooked the need for this retooling job. We seemed to feel that our mechanical magicians should turn out war materials like rabbits from a hat. For years we had been told that we were pitifully defenseless. All at once we believed it. Believing it, we wanted guns—right now. We appropriated billions. We learned that Westinghouse, for instance, had a contract for gun mounts. Where were those gun mounts?

They were coming. But that gun mount plant required 20,000 man-hours of tool designing—then 73,000 man-hours of tool-making. That totals a year of 40 hour weeks for 46 men.

We learned that Chrysler had tank contracts.

"Why don't they build them?"

Two million tool room hours went into the Chrysler defense plants.

We demanded thousands of airplanes—but nothing seemed to happen. One reason was that airplane building was not a mass production industry. Demand did not justify the necessary investment in tools. Moreover, changes in design were so rapid that yesterday's machine might be obsolete tomorrow. That was only a few months ago.



Training courses for new operators were as important as machines. Skilled men turned teacher

Today in the Glenn L. Martin airplane building plant the powerful jaws of a "metal stretching" press seize a sheet of duralumin, hold it firmly as a die rises from below, thrusting and molding. In a few minutes, a sheet of rough metal has become a piece of airplane skin. The old bumping hammer method required three to four hours.

The "skin" moves on to be fitted over sheet metal ribs, shaped out on huge presses. A harness-like form, its metal straps filled with holes, drops from the ceiling. An operator pokes a drill through the holes, bores through skin and ribs. Riveters follow to bind the parts into one tight assembly.

Meanwhile wing spars are assembled on long, narrow tables where each piece fits snugly into its niche and traveling drill-presses, moving on long steel tracks, start at one end and drill all holes exactly.

Elsewhere other machines are busy on nose, center and tail. Soon an overhead railway will carry the various sections to the assembly floor where steel fixtures will hold them firmly together for final operations and the hook-up of control, wiring, instrument, fuel and other systems.

Shortly a new "Flying Torpedo" rolls out on the broad apron for its ground tests.

Figures are taboo but early counts show that such mass production methods have cut in half the man-



Jobs which take years to learn were broken down so that new men need learn only one operation

hours necessary in plane building and even more spectacular savings are expected as the men become increasingly accustomed to the system.

Furthermore, the Martin Company is planning expansions that will triple the size of its plant.

It is the same at other airplane plants. Bell Aircraft Airacobras, cradled in dollies, move through the plant on endless chains sunk in the floor. At each of 12 stations, workmen do specialized jobs, using parts brought to them by overhead conveyor with nearly a mile of track. Elsewhere another endless chain dunks parts needing painting into dip tanks at the rate of 1,800 an hour. Then infra-red lamps dry them.

At Vega Airplane Company's new \$7,000,000 plant—on ground that was a park in July, 1940—sub-assemblies move by crane, or monorails or elevators to the two final assembly lines, 850 feet long, each capable of handling 16 planes at once.

At the end of the line the plane rolls on to a brake-testing machine where the retractable landing gear is checked out, brakes are run in and tested.

At Curtiss-Wright a complete program of retooling with automatic machines has not only speeded production but permitted the use of semi-skilled labor on jobs once requiring now unavailable skilled men.

Perhaps we're getting unduly excited about this. Maybe there's really nothing at all dramatic in this ability to rise to an emergency overnight with new and

better methods. Maybe the fact that shells which were produced in the last war at the rate of 18 or 20 an hour are now turned out faster than one a minute is just drab and commonplace. The machine tool industry takes it pretty casually, at that.

"What we have done," says Norman R. Earle, vice president of Potter & Johnston Machine Company, "has been of a routine character and it is so conventional, representing as it does a reasonable degree of good management, that we do not feel we deserve any publicity."

All his company has done is to "expand its real estate, install modern machines, reduce the number of models in production and institute training programs for a substantial number of men."

Those "routine" activities have resulted in an output nearly three times as great as it was two years ago.

4 ★ Men Behind the Tools

100 hours a week. Novices and .001 of an inch. Some built the plant, others built the skill. Producing while they learn. Filing burrs for defense. Training the trainers. 70 days ahead of schedule. "Four blades of grass for one." "They cooperated when called on." "Marvellously intelligent and receptive." One task means higher speed.

BUT, SAY it isn't romantic. It isn't done easily, either. Or quickly. The 40 hour week is mostly a memory in the machine tool industry. Months ago the industry averaged 53 working hours a week—highest in the country—with three shifts a day, or two long shifts the general rule. By last November 87 per cent of the plants were operating 100 hours a week.

Nor was the finding of men to make those long shifts possible the easiest part of the job. And when a machine tool builder says "men" he means "skilled men." A novice has no business fiddling with a .001 of an inch.

Fortunately the industry generally has maintained apprenticeship courses in good years and bad. The Gisholt Machine Company, for instance, maintains a course for four-year apprentices indentured under the state laws of Wisconsin. Browne & Sharpe and Pratt & Whitney are others with excellent courses.

But even that was not enough for the emergency. Apprentices were too few—and the usual course too long. Most of the companies went to work on their own. The usual method was to put likely looking applicants under the guidance of skilled men. When Kearney & Trecker expanded its plant, new men were trained on the equipment to be used even before it was

installed. Three men were hired for each new machine. Learning under experienced operators, they were ready when the plant was.

At Yale & Towne Manufacturing Company, where equipment does not lend itself to mass production, they not only doubled and tripled their quota of apprentices, but the personnel department developed a training program by which more than 400 untrained men were put immediately to work on the simpler operations.

Under the supervision of skilled machinists, the novices were treated to progressive schooling while, at the same time, actually producing on the job. As they become skilled in the simpler tasks they move on to more complex ones. Eventually they will become full fledged operators.

At Warner & Swasey a short term learners' program began in 1935 for trainees ranging from 19 years old to more than 40. To qualify, a man must demonstrate ability to read blueprints and handle micrometers. Men who can do that are put to work at such

simple tasks as filing burrs which soon reveal if they can use their hands and heads.

Then they are assigned to work under experienced operators. At first they only watch, hand their mentor tools and try to be useful. Soon they are handling the simpler controls, eventually running the machine. Then the instructor moves elsewhere but the foreman keeps an eye on the newcomer and makes out periodic complete reports on his progress.

No fixed period for learning is set. It ranges from two to five months with the average about four and its success is demonstrated by the fact that, in the company's plant, the assistant foreman of the main assembly department, the foreman of one of the unit assembly departments, two of the setup men in the grinding department and one of the foremen in the precision grinding department all started as learners.

Moreover, men who started work as non-skilled help have been inspired to learn blueprints and micrometers so that they could qualify as learners. Today, of the



Spirit of '41: Carl Jorgensen, Gisholt Machine Co. foreman, injured, worked from a wheel chair so production wouldn't lag

company's 3,000 shop employees, more than 50 per cent are men trained on the job since September, 1939.

Such increases in the number of workers put a tremendous load on the supervisors. The Monarch Machine Tool Company worked out an ingenious plan to meet that difficulty. As a first step they freed supervisors of all training responsibility. Then they broke down all the work in the plant into the smallest possible units. Having done that, they picked, from among their workers, 90 men who had the experience, skill and temperament to serve as instructors. On the day ground was broken for a new plant, these men started to school to learn "methods of breaking in new men."

As it turned out, the new plant was completed ahead of schedule. Seventy days after ground was broken, the first machines were set up and the instructors went to work. Within two weeks after the plant was opened the instructors had 300 new men actually at work. Today Monarch is turning out engine lathes for national defense at a rate 28 per cent higher than when the instruction method was begun, four months ago.

"Well," someone asked, "how could the company afford to take 90 of its best operators out of production when it was already swamped?"

"We had to," says Monarch. "We had to grow four blades of grass where one grew before."

Naturally the fact that men used as instructors were necessarily the most capable workmen affected plant efficiency temporarily at Monarch—and everywhere else. It raised other problems, too. As H. J. Griffing of Norton Company points out:

"Proper compensation must be arranged so that the earning power of good men is not affected."

Apparently whatever methods were used to meet that need were satisfactory because everyone praises the fine cooperation of the older men.

"Realizing the vital role they must play," says Warner & Swasey, "not only in continuing their regular work but in passing on to others what they had learned on their own at great cost in time and effort, these older men have unhesitatingly cooperated when called upon to do so."

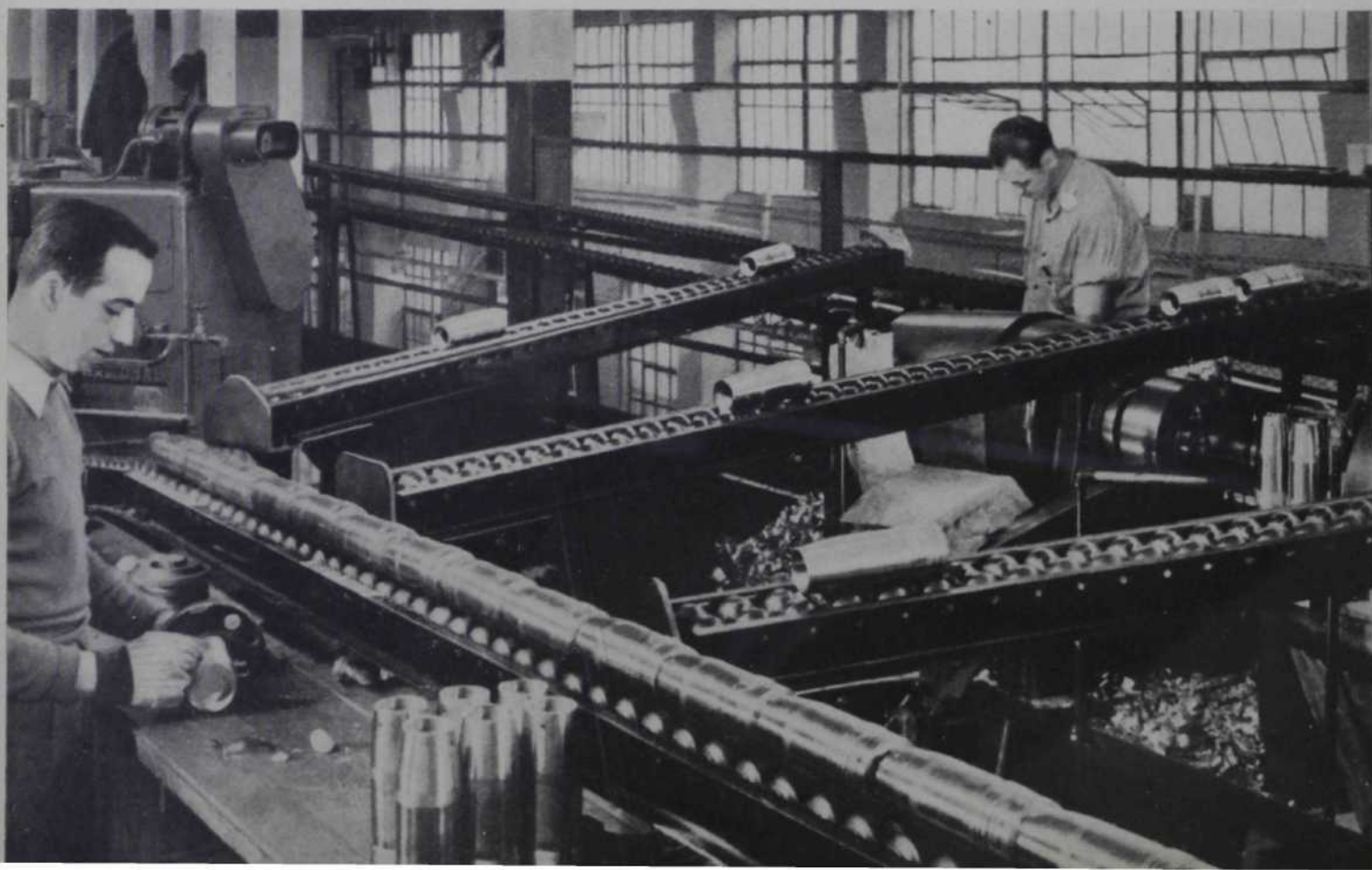
"They have unselfishly given these newcomers every kind of help they knew how to give," says the American Tool Works.

While, as for the youngsters themselves:

"They have been marvellously intelligent and receptive to new ideas; quick to grasp new skills. Men with five or six weeks' training have gone to work on machines and produce on an increased scale with the old timers on the same job."

Simplicity played its part, too.

Conveyor builders turned ingenuity to production lines, developed concave roller for moving shells, speeded work, saved materials



A radio announcer interviewed a skilled mechanic at his machine:

"What are all those levers and wheels and gadgets on that five ton machine of yours?"

"Operating levers. I've got 25 of them."

Even intelligent and receptive newcomers don't learn that trade overnight.

They might learn to handle one lever—or two. The industry took that into consideration, both for itself and for its customers. At the Martin plant, which expects to increase employment from 18,000 to 42,000 in a year, training courses are simplified by "tooling and production systems designed to allow the use of many workers of lower skill standards than have heretofore been possible."

"The work that one or two men customarily do in making the subassembly has been broken up among a number of men, each of whom operates one machine or performs one type of hand operation," the company says. It adds:

"One man who does one type of job or operates one type of machine is less likely to make errors than a man who does a variety of jobs to complete one operation. The single-task operator not only attains greater accuracy, but he naturally attains higher speed."

Bell Aircraft has also gone in for "simplification of construction techniques so that semi-skilled men could do the work as well and speedily as experts."

The company, which has trained 8,500 young men, "realized that it would be impossible to develop master craftsmen overnight. But the new employee is expected to become an acceptable workman at the specific stations to which he will be assigned."

Meanwhile the South Bend Lathe Works added an extra fillip to the training programs by turning out a series of sound movies showing how to run a lathe. It made these available to apprentice schools, vocational schools, Army and Navy training schools, almost anybody who needed to train lathe operators.

Apparently they've thought of everything.

5 ★ 500 Serve as One

A manager turns detective. A planer on a river bank. Tools a junk man wouldn't look at. A tool \$50,000 couldn't buy. Patents for free. From carpets to milling machines. Ball gloves to weapons. No profit but patriotism. Saw technique for armor plate. Salvaging 250 pounds of tin

BUT, IN SPITE of new buildings, new machines, long hours and training programs, the machine tool industry could not have done the job alone. It had help.

Some of that help came from customers, American Locomotive Works among them, who exercised their own ingenuity instead of hounding the machine tool builders for deliveries that were temporarily impossible.

American Locomotive needed a tool for planing cradles of 105 mm. gun carriages. Delay in getting



Production lines for planes seemed impossible but companies and tool builders developed them

it could create an awkward bottleneck. But E. N. Boswell, manager of the company's Dunkirk plant, has a long memory. Twenty-five years before, the equipment at the company's Paterson plant had included a planer used for locomotive driving boxes. That machine might do. But the Paterson plant had been closed down in 1926.

Mr. Boswell turned detective. He traced the needed planer from Paterson to Richmond. It wasn't there. The chase led to Schenectady. It wasn't there, either. He finally found it, abandoned, on the banks of the Mohawk River. Now, completely rejuvenated, it is turning out gun carriages.

International Harvester's Milwaukee works prepared to turn out 75 mm. shells. They needed machines, too.

"You could have them in seven or eight months."

No good. J. E. Harris, superintendent and V. A. Guebard, his assistant, prowled through the company's stores of obsolete machinery.

"The greatest miracle of all," says the Army ordnance inspector on duty at the plant, "was going out to the scrap heap and taking tools that a junk man would hardly look at and rebuilding them for turning out some of the best shells now being produced."

Somewhat the same thing happened when the Dodge Manufacturing Corporation needed a horizontal boring mill to fill orders for the Maritime Commission. It



Spirit of '41: Dec. 31, Allis-Chalmers was ordered on a 24 hour, seven day week. Among workers notified was Robert Price who rushed from New Year's Eve party in full dress and pulled on overalls. Price, a plant "learner" 14 months ago, now operates one of company's newest lathes turning out war materials

would have cost \$50,000, but they couldn't get it at any price. So, out of the warehouse they dragged a boring bar, long since retired, and rigged it into a boring machine that met their needs.

But the greatest help the machine tool men got came from the subcontractors.

The practice of subcontracting began even before our defense effort started. It was used first to help produce war materials for France and Britain. It spread rapidly. A recent count showed 89 companies using subcontractors for subassemblies; 37 having subcontractors make complete machines. Probably no one has had time to count the actual number of subcontractors now working on war materials, but Timken, itself a subcontractor for many kinds of weapons as well as a prime contractor for others, uses 500 different suppliers and subcontractors in its ordnance department alone. That number isn't unusual.

Help is where you find it

Some of the subcontractors were already pretty close to the machine tool field if not definitely a part of it. Link Belt Company, for instance, makers of roller bearings, chains and sprockets, was a natural source. So was Bantam Bearings Corporation. The former expanded its working force 60 per cent. The latter, operating three shifts a day since 1939, has increased production three times and has also permitted free use of its patents by the Bureau of Ordnance, the Navy and manufacturers engaged in defense work.

But many of the subcontractors bobbed up in unexpected places.

Twelve months ago the Bigelow-Sanford Corporation was making carpets. That was before the Van Norman Company saw their plant and talked to them. Now Bigelow-Sanford is doing the greater portion of the work on 60 milling machines every month.

Boston Wire Stitcher Company has adapted its equipment to the manufacture of anti-aircraft gun parts for Colt Patent Fire Arms Company and gun charger parts for Bendix Aviation Corporation.

The list is endless: The American Can Company producing parts and subassemblies; the Mohawk Carpet Mills turning out certain types of machine tools in its machine shop; The American Writing Paper Company, Fuller Brush Company, A. G. Spalding & Sons, Ludlow Jute Mills.

And subcontracting isn't a bed of roses.

"The excess costs of subcontract work," says Mr. Griffing, "are such that there is no profit in practically all of the subcontracting work and in many instances there may be losses. This is a factor that too many businesses and individuals have overlooked entirely. It must be looked upon as a patriotic duty."

While the machine tool men have been busy with the



Few machines already in use could be used to make weapons. War equipment needs many materials—like armor plate—not used in peace

job of removing chips, others have been equally busy shaping metals in other ways and for other purposes.

Henry Disston & Sons, Inc., make saws. In World War days they had a go at making armor plate and had kept their hands in by means of a small pilot plant. When the emergency arrived, the small plant became the Philadelphia Armor Plate Plant of the U. S. Army, operated on lease by Disston. Production jumped with problems paddling along behind.

One of these involved straightening of the plate—called “smithing” by the elect—made necessary by the fact that, when armor plate is heat-treated, it warps. “Smithing” is also one of the main operations in the manufacture of saws. So Disston’s sent one of their most expert smithers to the armor plate factory to train a crew of men in the handling of the gigantic presses and brakes needed in the operation.

While this was going on, the difficulty of getting a sufficient supply of steel ingots threatened to become a bottleneck. The company met that by what they call “little things.” They decreased the thickness of furnace bottoms and sides, installed higher grade refractories and thus increased the amount of steel produced at each melting.

Today the armor plant is producing far beyond its rated capacity.

York Ice Machinery Company’s contributions in-

cluded a conservation program. As W. S. Graby, general shop superintendent, describes it:

We were large users of nickel-iron but were forced to change to moly-iron. We devised a method of adding scrap copper, virtually useless even to scrap buyers, in the furnace and, with this formula, we obtain an iron which has the most essential qualities of nickel-iron. For core rods we use scrap from neighboring chain manufacturers instead of scarce purchase rods. By reclaiming tin alloy from coil dip-tanks, previously a scrap sold to dealers, we were able to salvage 250 pounds of usable tin per week.

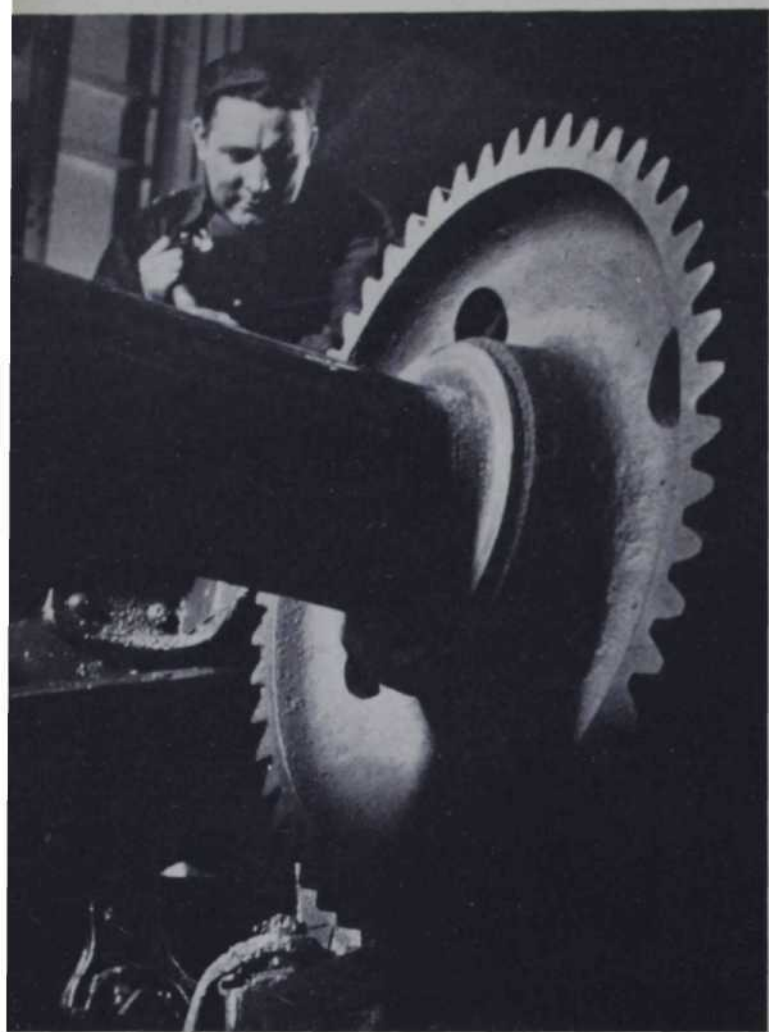
6 ★ Getting the Mostest There

No wait for materials. 40 years of hurrying. A better ride for shells. Wood replaces rubber. So that nickel may be saved. “We didn’t think it possible.” Employee-management cooperation. “Blue made men sleepy; green made them sick.”

THEN there are the conveyor manufacturers.

A conveyor is not a machine tool but the thousands of machine tools turning out war equipment would be slowed to a crawl if materials were not brought to them promptly or their completed work was not carried away when completed.

In the past 40 years, the conveyor industry has developed a whole arsenal of ingenious devices for Amer-



EWING GALLOWAY

Skilled workers have cooperated every way they could, doing their jobs, helping newcomers

ica's production system. Many of these have been adapted to war needs.

At the new Kingston, Ind., shell loading plant, an extensive system of roller conveyors has been installed for storing shells as received at the plant; belt conveyors carry cartons; monorail and trolley systems carry trays of shells past various operations; slat conveyors handle heavier and bulkier cases.

In another plant, equipment built by Standard Conveyor Company carries gun clips, engine parts, foundry flasks, steel coil, steel plates and other items.

But adaptation was not enough. Priorities, shortages and peculiar needs plagued conveyor people as they did every one else. They, too, found the answers.

In World War days, steel shells for 75 mm. and 155 mm. guns were carried on high cost, heavy and sluggish cast iron rollers. Now these same shells are carried on a concave roller made of steel tubing—each roller weighing less than one-quarter as much as the old type. Four of them can be produced from the material needed for one of the old.

Non-sparking equipment, necessary to convey powder and high explosives, was once made from brass, aluminum or non-sparking alloys—all on the critical list now. Today that equipment is made from selected maple wood stock mounted in maple frames and revolving on bronze non-sparking bearings. The same material serves in shell machining operations where rubber rollers were once believed necessary to protect the new shells from scratching and damage.

They surprise themselves

The Harnischfeger Corporation, needing to increase production of electric cranes, excavating machinery, arc welders and prefabricated houses—all wanted in some phase of the arms program—added new machines, renovated its old ones, standardized models, substituted welded design for casting construction, and overhauled its material handling methods.

Then it went over its entire line, revising designs which called for a high percentage of nickel alloy steels, so that valuable nickel might be saved. All this did not keep the company too busy to develop a successful method of welding armor plate.

Other companies in the industry have been equally ingenious.

"We are doing things we never previously thought possible on old machine tools and in the matter of substituting materials," says Stephens-Adamson Manufacturing Company.

The American MonoRail Company, putting 95 per cent of its production into defense plants, has grown from 44,000 square feet of space and 119 employees to 85,000 square feet and 399 workers.

Whiting Corporation, where production of traveling cranes is 20 per cent above the previous high, has added steel shears, metal working and aircraft maintenance equipment to its output.

"Each of these lines adds volume exceeding entire company production in 1932."

Since facilities have been increased only ten per cent, that represents something of a triumph of employee-management cooperation. Extra shifts and overtime work have been common, but Whiting lists among its labor policies:

A wage adjustment plan which automatically increases workers' pay as profits increase. A safety program which brought a record for heavy machinery industry of 3,650,000 consecutive safe man-hours. "Town hall" meetings where employees learn to recognize that they are a part of the business. A suggestion system that has paid many dollars for ideas and training plans which provide key men from within.

Contributions to machine efficiency came from many

firms which didn't make machines at all. Monsanto Chemical Company, for instance, recognizing the dangers growing from the appearance of hordes of comparatively inexperienced men around machinery, developed a transparent safety guard to reduce industrial hazards.

DuPont, cooperating with Philadelphia Electric Company, added something to safety and speed with experiments in "three-dimensional seeing." In this effort to "decamouflage" machinery, the companies worked out various color combinations designed to make work stand out, save sight, warn of danger. They report that light buff is the most suitable color where iron and steel are being worked, with light gray a close second.

The Martin Company, experimenting along the same line, discovered that "blue makes men sleepy; red made them irritable and green made them sick."

7 ★ A Stock Pile of Ingenuity

Dictators call it "ridiculous." Few cheers for the doers. Ever hear of John Wilkinson? Or James Nasmyth? Their spirit lives. Twice as many guns in one month as in all 1940. No dictated thoughts. A bottle of glycerin

SO IT GOES as the brains and skills and versatility of our industrial plant turns to the chore of war production. Only a few are listed here. There are thousands of others. If there were not, the President could not warn our enemies that in 1943 we would produce 125,000 planes, 75,000 tanks, 35,000 antiaircraft guns.

Even so, the dictators call his plan "ridiculous."

To them it may seem so. Many Americans, used to big figures and big accomplishments, found it staggering. To the men who must accomplish it, the plan is a tremendous challenge. Meeting it, they will receive few cheers. Not that they will expect any. For a people who have been singularly dependent on tooling and tool-builders—and whose safety depends on them now—we have accorded the art and its practitioners remarkably little recognition.

Who, for instance, ever heard of John Wilkinson?

We've heard of James Watt, of course. In 1765, he invented the steam engine. It remained in the model stage for ten years because Watt could not hand-bore his cylinders accurately enough to make them steam tight.

He packed those rough hewn cylinders with wool, with cotton, bagging and everything else he could think of. They still leaked.

Then, in 1775, Wilkinson invented a mechanical boring machine. That made the steam engine possible.

Fulton took the steam engine and applied it to water transportation in the *Clermont*, but Fulton was stumped in 1869 when plans were made to build the *Great Britain*, a paddle wheel steamer of, for those days, gigantic proportions. She needed a paddle shaft 30 inches in diameter and nobody knew how to forge a shaft like that. So James Nasmyth, a tool maker, designed a steam hammer to meet the need. The *Great Britain* was never built but the hammer was, and it forged many a shaft larger than 30 inches.

We remember Eli Whitney as the inventor of the cotton gin, not as the man who developed mass production of firearms.

Such men made our American way of life possible; and the breed has not died out. Our factories are full of John Wilkinsons, James Nasmyths and Eli Whitneys today—men who can take a department which formerly made parts for refrigerators and fire extinguishers, add a few pieces of equipment, and start making shell cases.

At the Bridgeport Brass Company, where that was done, the oak-paneled room in which the board of directors used to meet has lost its air of sanctity. In that

Day and night the job goes on. By last November most tool plants worked 100 hours a week



room today several hundred men and women inspect and pack cartridge cases for aircraft use, while, in the company's former garage, recently installed annealing furnaces and other equipment turn out artillery cartridge cases for the Army.

It was this same company that, when France fell, headed off 114 carloads of brass discs already on the docks for shipment to French factories and eventually got them to the British.

Our modern Wilkinsons, Nasmyths and Whitneys excel at that kind of thing. That is why one plant is making twice as many machine guns in one month as it produced in the whole year, 1940; another is turning out as many tanks in a week as this country made in the whole World War.

Nor are those the final figures. Each of those plants is expanding. New buildings are going up. New tools are being built. New men are waiting to man them—

and those men will not be automatons who, for a disciplined generation, have learned to think only such thoughts as a dictator permitted. They will be free Americans used to facing their own problems and thinking out the answers.

Just because a thing has always been done so—or has never been done at all—constitutes, for them, no reason to suppose that it cannot be done differently, and perhaps better. When slow deliveries of heavy duty radial drills caused stacks of work to accumulate waiting a turn at the cutting tools, many minds began to seek a solution.

Small tools for big jobs

Heavy tools had always been used because the great mass of weight had been regarded as necessary for strength and rigidity, even though the actual drill or tap was frequently small.

Walker-Turner Company engineers knew from experience that, under certain conditions, far lighter machines would serve.

"You don't need a five ton truck to deliver a pound of butter," they said.

The argument seemed sound. Result: Many companies found that a \$300 light machine would serve in place of a \$3,000 one that couldn't have been delivered for ten or 12 months anyhow. Shortly weapons were being built with tools which had seemed not to exist.

It is true we haven't as many of those weapons as we need—not yet.

But no enemy nation can match our stock pile of ingenuity.

The Pullman-Standard Company was having trouble. Thin sheets of aluminum alloy were imperfect as they came out of the forming press. The trouble seemed to be friction but grease or oil couldn't be used. Water wouldn't do.

G. W. Conley, of the inspection department, considered the problem. Pretty soon he came in with a bottle of glycerin, usually used as skin lotion.

It worked fine.

O. K., Hitler, can you order men to have ideas like that?



The Nazis, who "thought of everything," still can't match our stock pile of ingenuity



R. F. NESMITH

Millions who have been spared federal taxes will feel the pinch of the new program

How You Will Pay for the War

By DUKE SHOOP

LOTTERIES, sales taxes, pay roll taxes, compulsory loans are a few of the ways suggested to raise the \$56,000,000,000 to beat Hitler. Whatever plan is adopted will hit every one

LONG range weather predictions have been taboo since our entry into the war for fear they might provide information of value to lurking Axis bombers awaiting a chance to scare the wits out of those who thought "It Can't Happen Here." But there is no censorship restriction against preparing Mr. and Mrs. John Q. Public for the jolt they may expect next time the federal tax collector comes around.

The shock will be equally great on the Kansas wheat farmer, the lumberjack in the Pacific Northwest, the youth behind the machines turning out the implements of war and on the men who still qualify as employers and sign their names to the checks of their employees.

America is in an all-out war, a war of unbelievable proportions, a war that will cost astronomical billions, to say nothing of the loss of life and blood.

President Roosevelt and his military advisers have recommended a war program over a three year period costing \$150,000,000,000, of which \$56,000,000,000 is to be spent in the fiscal year starting July, 1942, for guns, tanks, ships and planes with which to drive

Adolf Hitler and his puppets to rout. To finance this gargantuan program Mr. Roosevelt has urged Congress to increase taxes by \$9,000,000,000—\$7,000,000,000 to be raised by increases in rates on present tax sources and \$2,000,000,000 to be gained from hiking pay

roll taxes.

If you aren't already dizzy from such figures we'll flabbergast you a bit more with the President's statement to Congress that he expects the Government to borrow \$34,000,000,000 in the fiscal year beginning July 1.

How—you are probably asking yourself—can the Government raise such staggering sums, the largest amount of money asked of any nation at any

time? A great many persons, the wheat farmer and the lumberjack among them, undoubtedly will be willing to let the "rich" pay whatever Uncle Sam expects of them to carry out President Roosevelt's blueprint for the complete destruction of the Axis armies bent on a conquest of the world. But the rich aren't so rich any more and what few "rich" there are wouldn't be able to buy many four-motored bombers or equip a tank corps if J. Edgar Hoover's G-Men made them divvy up with every cent they have in the bank.

The rich can't pay it

IF WE took every cent of earnings away from all who earn \$5,000 or more a year, that money would last us less than 60 days.

Even back in 1937 their earnings, if entirely confiscated, would have covered less than six months' expenses. In those days our federal expenditures amounted to the comparatively modest sum of \$8,000,000,000.

So that's the reason the Kansas wheat farmer, the lumberjack and the boys around the cracker barrel in the corner grocery are going to have to pay the tax bill this time. There are millions upon millions of farmers and workers, small merchants and clerks. Heretofore they have been spared federal taxes, or at least touched lightly, because

they had far and away more votes than the so-called rich.

Let's see. If Mr. and Mrs. Public are going to be the ones to take it on the chin, what will it cost, where will it pinch, and how can we disguise it best?

If anybody is sadder than the taxpayer is going to be it is the congressman and senator who must vote new taxes in the next period. What they are saying publicly doesn't quite jibe with what is being said in restaurants, cloakrooms, committee rooms and in their offices. But that is no reason why the taxpayer shouldn't know the gist of these conversations and the long list of tax possibilities and available sources that are being surveyed in an attempt to meet the requirement announced by the President.

To begin with, there is plenty of talk of a federal sales tax on everything you buy—food, clothing, medicine included. Until now President Roosevelt has opposed the sales tax idea on the theory that such a tax takes no account of ability to pay. Even now he hesitates to go the full route. He is still bothered by the question, "why should a farmer, just barely able to make ends meet, have to pay the same sales tax on a pound of bacon as a rich man?"

Answers are hard to make to such an argument, except on the basis of consumption of consumer goods.

Henry Morgenthau, Jr., Secretary of

the Treasury, will advise Congress on what he believes are the best ways of raising the billions needed to buy the materials with which we can defeat Hitler. It is improbable that Secretary Morgenthau will say anything about a federal sales tax inasmuch as the President hopes to avoid it. But Mr. Morgenthau seldom has had his way with Congress, and many of the lawmakers are convinced that a sales tax is the only means by which an appreciable amount of revenue can be collected easily.

Don't think for a minute that you can end your patriotism and show your contempt for the one-time Austrian house painter who caused this war by simply paying a four to eight per cent sales tax. That's only a drop in the bucket. The President and Secretary Morgenthau aren't the only ones who think they know how to raise the money. Many of the lawmakers have their own pet panaceas for the tax crisis, some of them fantastic, many of them ingenious enough to come from a Pandora's box.

New schemes for money-raising

FOR example, it has been suggested that the Government hold a big lottery, sell tickets at \$1 each, raise millions, and at the same time offer large cash prizes to the holders of the lucky numbers. This unorthodox means of providing the money might offend many persons and it's probable that the scheme will fall by the wayside. But men who entertain such unorthodox money-raising ideas will certainly think up and vote for others that will work.

Again, for several years the social planners who have had a chip on their shoulders for any one who has made a financial success in life have flirted with the idea of limiting profits to six per cent of a corporation's invested capital. Anything over six per cent profit would be gobbled up by the Government, confiscated. But no one in the Government knows exactly what invested capital is and the supreme court has yet to say. Further, those who would limit profits to six per cent on invested capital would make no provision for the days when business is bad and there are no profits. Secretary Morgenthau proposed this scheme last fall. Immediately those who know the risks of business took him to task. After

(Continued on page 76)

The American people face a call to arms—and to pocketbooks

HOBART FROM
MORSEMEYER



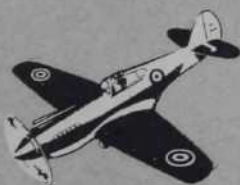
FIGURES ARE VITAL IN SPEEDING WAR PRODUCTION



CONSTRUCTION



TANKS



AIRCRAFT



SHIPS



ORDNANCE



ADMINISTRATION

Figures are the lifeblood of war production . . . figures on which to base estimates, budgets, commitments . . . figures that keep materials and parts moving toward scheduled assembly points . . . figures that assure the prompt payment of employees . . . figures for providing up-to-the-minute reports which permit management to make quick decisions, take quick action.

Both government and industry use Burroughs machines of many different types and styles for obtaining these vital figures and writing essential records in less time, with less effort, and at less cost.

BURROUGHS ADDING MACHINE COMPANY • DETROIT, MICHIGAN

Today's Burroughs

DOES THE WORK IN LESS TIME—WITH LESS EFFORT—AT LESS COST

Move Over, Managers!

By FRED DeARMOND

"WE STAND under an attack and a challenge. This attack impugns our integrity, our ability, our loyalty to our country."

America's No. 1 industry is addressing the nation through its spokesman, the Automobile Manufacturers Association. The attack and the challenge that it repels are the same that is now or soon will be directed by the left wing of organized labor at all industry. It is a challenge to revolutionary change in the American way of choosing management. Behind this change stands Labor's Popular Front, reading the blueprints of a new order—the future which Professor Rexford Tugwell said in 1932 "is becoming visible in Russia."

The attack of January on the auto-

C. I. O. bids for control over heavy industry under plea of war's necessities. Murray-Reuther plans camouflage scheme to supplant management

mobile industry by the C.I.O., using its flag-draped Reuther Plan as the weapon, has been settled by a temporary truce, or "initial victory" for the industry, as one of the press associations reported. It is certain to be renewed. To many people, this plan, first brought forward more than a year ago for making warplanes in automobile factories, is nothing more than a patriotic effort

to speed production. But it can only be understood as part of a much bigger idea in the minds of the C.I.O. chieftains. That idea is union control of industry. Every move in its furtherance edges the labor leaders another step closer to the directors' table.

Interesting as a clue to the ideological complexion of C.I.O. leadership and the objectives that motivate their plans





So long as men work and dream and plan for the future

SO LONG AS MEN pursue happiness and security for those they love, they will seek assistance in the things that help their dreams come true.

That is one reason why Americans own more life insurance than any other people in the world... no other people are so free to plan their own futures.

But even the 65,000,000 Americans who own some life insurance do not own enough to carry out all their plans. Remember that each year 1,200,000 young men and women graduate from school or college... about 1,500,000 new homes are established... approximately 2,300,000 babies are born for whom parents wish to provide protection.

Circumstances change constantly, and these changes increase the need of people for life insurance protection. So, while Americans own much life insurance, they need more. However, we believe it is no exaggeration to say that the number of people either unprotected or

insufficiently protected would be much greater than it is... were it not for the life insurance agent.

The agent attracted the public's attention to life insurance in the days when it was new and novel. Because he believed enthusiastically and sincerely in life insurance, he succeeded in imparting that belief to others. Like the crusader he is, the agent had the courage and persuasiveness to help people adopt new ideas.

Without that same kind of salesmanship and service, Americans would still

be driving horses and buggies. Homes would still be without washing machines, telephones, and radios. The idea of 65,000,000 people owning life insurance would be too fantastic to talk about.

So long as men work and dream and plan for the future, they need life insurance and the benefits it brings. So long as this is true, they should have, and do have the guidance of trained, experienced agents who are qualified to advise what type and amount of life insurance best fit people's needs and circumstances.

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This is Number 46 in a series of advertisements designed to give the public a clearer understanding of how a life insurance company operates. Copies of preceding advertisements in this series will be mailed upon request.

Metropolitan Life Insurance Company (A MUTUAL COMPANY)

Frederick H. Ecker, CHAIRMAN OF THE BOARD

Leroy A. Lincoln, PRESIDENT

1 MADISON AVENUE, NEW YORK, N. Y.



is the background of Walter Reuther. He is a career man in industrial unionism, one who learned his tool maker's trade with a very different ambition from that which inspired Henry Ford.

After schooling themselves at Brookwood Labor College, Katonah, N. Y., Reuther and his brother Victor went to Russia, where they worked in Soviet

ment making without disruption and unemployment. The men who know—the automotive engineers and executives—have maintained all along that "this job could not be done by shop methods—a cannon on the lathe this morning and a crankshaft on the same machine this afternoon."

But Reuther and his plans are only incidents in a carefully organized purposeful effort to supplant management in the control of business. In keeping with the usual strategy, the change is to be by short, "easy" steps. A variation of Reuther's idea, also camouflaged as an aid to war production, is Philip Murray's Industry Council Plan.

This scheme would accomplish nothing less than the mounting of C.I.O. leaders to management controls of all productive enterprise. Of course, a 50-50 division of power is all that is suggested now. Each industry would be ruled by a council made up

equally of management and union representatives—plus the inevitable chairman representing the Government. With what Representative Sumners of Texas recently denominated "a labor government" at Washington, no realist can entertain the slightest doubt as to who would be "uncle" in such a structure. Every deadlock would be resolved by the government chairman deciding according to the "line" dictated by the dominant party. Under present leadership that would mean a Labor Front government such as divided and weakened France during the Blum regime. Under a strongly conservative administration it could conceivably become an industrial Fascism not unlike that in Italy.

When Philip Murray explained to the recent C.I.O. convention the working of his scheme—how the Industry Councils would have their roots in local joint industry committees made up in equal numbers of men from the unions and management, and the whole hierarchy headed by a National Board of Review constituted similarly to the Industry Councils—he made this promise to his followers:

It gives labor forthright administrative responsibility on each board from the bottom right up to the top.

While the plan won the enthusiastic endorsement of Harry Bridges and the other C.I.O. leaders, others will sense in it a great deal more than meets the

eye. The frequent recurrence of the word "cooperation" in current C.I.O. literature suggests that a New York labor leader not long ago defined the new trade unionism as "a force that compels cooperation."

Heir of the radical unions

THE Reuther-Murray idea for giving management controls to labor leaders runs back through the C.I.O.'s short history and through that of its progenitors, the I.W.W., the Syndicalists and the Industrial Unionists. The C.I.O. is heir to all those abortive radical movements of the generation before its birth. It is the practical instrument of all who are promoting revolutionary economic and social change.

Syndicalism takes its name from the French word, *syndicat*, or trades union. In this country as well as Europe it stood for the transfer of the instruments of production from private ownership to the control of organized workers in each trade or industry. This distinguishes it from Socialism, which would vest all ownership of industry in government.

In the heyday of the I.W.W. and the new movement known as Industrial Unionism—both of which had practically identical aims—one of the I.W.W. leaders thus frankly stated the real plan of the future:

It is the avowed intention of both Socialists and Industrial Unionists to expropriate the bourgeoisie of all its property, to make it social property. Now, we may ask, is this right? Is it moral and just? Of course, if it is true that labor produces everything, it is both moral and just that we should own everything. But this is only an affirmation—it must be proven. *We Industrial Unionists care nothing about proving it.* We are going to take over the industries some day, for three very good reasons: Because we need them, because we want them, because we have the power to get them. Whether we are "ethically" justified or not is not our concern. We will lose no time proving title to them beforehand; but we may, if it is necessary, after the thing is done, hire a couple of lawyers and judges to fix up the deed and make the transfer perfectly legal and respectable. Such things can always be fixed—anything that is powerful becomes in due course of time righteous. Therefore, we

THIS BATTLE is a momentary climax in a struggle going on before we were in the war, before we began our organization for defense, before war or defense was thought of—back as far as the time when the New Deal was getting into momentum and C.I.O. was organized. During all this time the New Deal has had a project for changing the whole status of privately owned industry.—MARK SULLIVAN

factories and attended Lenin University. The curriculum there did not include Adam Smith, the Gettysburg Address, or any of the "outmoded" western bourgeois culture. Instructors did not impress the virtues of hard work as a formula for success. But out of their Russian experience matured those ideas of social upheaval that have kept the brothers bobbing up in the headlines ever since.

Back in America the brothers played leading roles in the automobile sit-down strikes, which in the words of an apologist, Robert Morss Lovett, Government Secretary of the Virgin Islands, were "a forcible reminder to workers, to management, to shareholders and to the public that legal title is not the final answer to the question of possession."

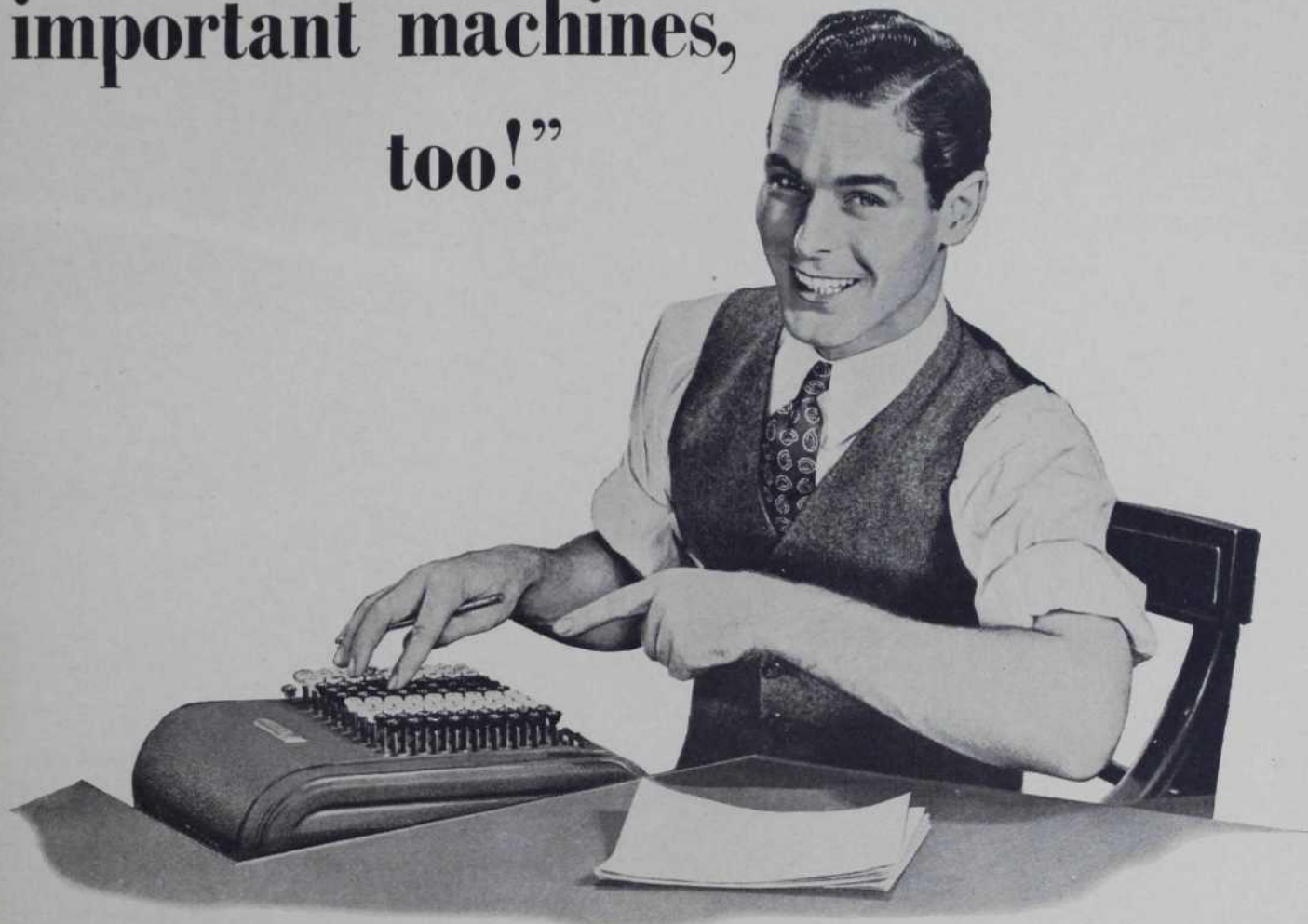
Collectivism for factories

WALTER REUTHER has a vision of pooling resources and abolishing competition in industry which smells too strongly of collectivism to have had much appeal to Americans in peace time, but which he revives in war time while pointing an I-told-you-so finger of accusation at management. His plan was rejected by both industrialists and O.P.M. experts in favor of the construction of separate plants for warplane making, not only because it went too far in undermining the competitive system but because it was basically wrong in certain technical respects, particularly in its easy assumption that automobile plants could have been converted immediately to arma-

I FEEL . . . that he (the President) really does have a plan and that he is determined to execute it. . . . It is a plan, as I see it, to gather together an irresistible power over the economic life of this country and to consolidate that power in the hands of his own following.

—WALTER LIPPMANN, June 1937

"They tell me tanks are
important machines,
too!"



"MY DRAFT BOARD seems to think Uncle Sam could get along without me in the Army — but that doesn't mean I'm out of the defense picture! Not as long as speed in industry is important, anyway!

"This Model M Comptometer isn't exactly a 40-ton tank — but it sure puts the 'blitz' on figure work, and it's mighty important to my company in helping to 'keep 'em flying'!

"So I feel like I'm doing my part. Because our management has to have accurate figures, and have 'em fast. And I know from experience that no adding-calculating machine can turn 'em out like the Comptometer. As for operating accuracy — every key stroke I make has to be passed by the Comptometer's exclusive Keystroke-Censor, which means operating *confidence* and top operating *speed*! On this machine, too, there are no

distracting zeros appearing on the answer dial, unless they're part of the actual answer — so I can read off answers a lot faster, with less chance of incorrect reading. (That's *another* exclusive Comptometer feature!)

"Sorry I don't have time to tell you about streamlined Comptometer *methods*, too — here comes another batch of rush figure work!"

• • •

To learn how Comptometer machines and methods handle "*more figure work in less time at lower cost*," telephone your local Comptometer Co. representative . . . or, if you prefer, write to Felt & Tarrant Mfg. Co., 1712 N. Paulina St., Chicago, Ill.

COMPTOMETER

REG. U. S. PAT. OFF.

ADDING-CALCULATING MACHINES

Industrial Unionists claim that the social revolution is not a matter of necessity plus justice, but simply necessity plus strength.

This is what really happened later in Russia. But with a profound difference which none of the pre-1917 collectivists foresaw and which is still entirely lost on them in America. At first, after the owners had been liquidated in Russia, industries were taken over and run by Factory Committees of workers. But this was only a transition. The Factory Committees were gradually and deftly supplanted by technical directors and commissars from Moscow, and it wasn't long until the workers had no more hand in management than they had enjoyed before the revolution. On this point James Burnham writes in his brilliant book, "The Managerial Revolution":

Workers' control, the (revolutionary) doctrine now reads, is a transition slogan . . . useful in arousing mass sentiment against the existing capitalist regime. . . . When the regime is functioning, workers' control must step aside. Naturally!

Collectivism, or undiluted communism, never works because it presupposes an equality among men that does not, never has and probably never will exist. Leaders of one type or another rise to the top quickly in any form of society. No organization can run long without leaders, either natural leaders or those imposed by force. About the time the Bolsheviks were discovering this truth, the *New York Times* carried the following dispatch from Russia:

An order was published today by the Bolshevik Party's Central Committee. It provides that Soviet factory managers must be obeyed by all workers, whatever rank these may happen to hold in the local Bolshevik Party or in their trade union section. It is decreed that a real single command must henceforth exist in all factories; and the trade unions, shop stewards' committees, etc. are told to cease attempting to usurp managerial functions.

When the Steel Workers Organizing Committee says that underlying its aspirations for management participation is the assertion of the worker's "intel-

lectual equality" with management, we may well raise this question: Do the S.W.O.C. leaders really believe the rank and file of their members are "intellectually equal" to the union leaders? To ask this question is to answer it. Of course they don't recognize that kind of equality, otherwise there would be more democracy in the unions, both C.I.O. and A.F. of L.

This new bid for power, not by the workers collectively but by their more ambitious leaders, is concealed under a

CIRCUMSTANCES accidentally made the automobile industry the designated guinea pig for this demand, which is actually a broad, fundamental policy that organized labor, particularly the C.I.O., hopes to apply throughout big industry. . . . The issue raised here is packed with the broadest possible implications for the future, affecting the shape of American capitalism for years to come.—RAYMOND CLAPPER

number of schemes for organized labor and management "cooperation." All of them reach out far beyond the sphere of labor relations and into that of management. The C.I.O. shop committees for utilizing workers' ideas for productive efficiency are based on one inflexible requirement. Before going into such organization, the union must have "permanent and satisfactory contractual relations with the employer" which to the C.I.O. means a union shop contract. This requirement reveals the scheme as merely part of a well thought out program for membership recruiting. It is not necessary to have a shop committee in order that employees may offer suggestions to management. Many firms have suggestion boxes and profit to the fullest from workers' ideas without contracting to share management responsibilities with union leaders.

A sojourner from another world, hearing all this agitation-propaganda for sharing management controls with labor and for recognizing latent ability in overalls would imagine that business in the United States is run by a decadent aristocracy supporting itself on the illusions of a bygone Bourbonism. What are the facts? Let's examine them briefly.

Actually, our American system is one designed above all to sift out the best and elevate them to management authority and responsibility. And by the best is meant not alone the most agile minds but the most rugged characters and the most adaptive personalities. All the burden of proof rests on the innovators to show that any factory committee or industry council could discover and reward talent with the high score that business has hung up in this country.

If there is anything to which the term "democratic" can be applied, it is to the system by which the leaders of business are chosen. When it comes to selecting the men to entrust with his property, his good will and his delegated authority, a business executive learns to consider the claims of merit even above those of blood or friendship. There is only one aristocracy in business—the aristocracy of brains and persistent endeavor. That is why every year the big employers are combing the graduating classes of colleges for promising young men. That is why they conduct training schools for their younger employees, why grade-by-grade promotion is the human proving ground by which more

and more leaders are discovered and rewarded. Men win their places as officers in the industrial army through the stiffest competition and their compensation is fixed in a market place no less exacting than that for goods.

Managers are especially skilled

WE may well look skeptically on any artificial selection that proposes to supplant the natural selection by which management has found its place. Of course there are potential managers in overalls in every plant and there is a big premium on them. This hard way, this weeding out process through which they pass, tests not only their mental powers but their staying powers, which are just as important.

Theorists and agitators for socialistic change have always underrated management's importance in the scheme of things. The true function of management is something far broader than the mere supervision of men at work.

A century or more ago, when the machine age was just breaking through its shell, ownership and management of business largely coincided. Even labor was often fused with these two. Then there was no great difference between the qualifications of a good workman and a manager who owned, directed and often worked with his hands in his

(Continued on page 64)

THE political link between the C.I.O. and the Administration is strong. If an issue arose between Mr. Knudsen and Mr. Hillman, very few persons here (in Washington) believe that the industrialist would be sustained.—ARTHUR KROCK in the New York Times, March 1941

A Wagon Worth Millions

By DON WHARTON

IN 1903 James L. Kraft began peddling cheese from door to door in Chicago. Today he has changed our eating habits and helps the Allies win the war



Collecting antique glass is one of Mr. Kraft's hobbies



Paddy and the wagon which grew into a national business

WHEN James Lewis Kraft was a 16-year-old Ontario farm boy he went to his Mennonite father one night with a question: If he paid off the \$4,000 mortgage on the farm could he then leave home, paddle his own canoe?

The father said yes and went off to bed. Next day the boy set out in an old democrat wagon, scouring the Canadian countryside for eggs to sell to hotels and retail shops in Buffalo. His

business grew and soon he had to hire a man to help him. When he was 18 and had just reached his \$4,000 goal, a tariff on eggs ruined his business.

That was 50 years ago. Today the boy from Ontario heads the world's largest cheese company. He has made us a nation of cheese eaters, taught us to eat twice as much as we used to. By spreading cheese production from coast to coast, he has helped lift mortgages

off thousands of farms. More important at the moment, Kraft has made it possible for this country to produce the millions of pounds of cheese with which the beleaguered British are stretching out their daily rations. The United States is now exporting as much cheese every 48 hours as in the entire year 1939. This tremendous expansion could never have been accomplished but for the boy who wanted to get off the farm.

When his egg business was wrecked, young Kraft did not give up. A country school teacher had once told him a man could do anything he set his mind to. Kraft believed it then, believes it now. He wanted to go to business school—and did, getting up at five, walking 12 miles a day, sweeping and dusting for his tuition.

On his graduation, the only job he

could get was as a delivery boy in a small-town general store. He took it, became a clerk, saved money, bought an ice business—and went into the hole when Lake Erie had its mildest winter in decades and there wasn't enough ice to cut.

Starting in a strange city

KRAFT saved more money to buy a small grocery store in Buffalo and was closing the deal the morning a bank failure wiped out all his funds. He helped organize a cheese company there; while he was looking after the Chicago branch, in 1903, his partners squeezed him out.

So there he was, 29 years old, in a strange city, with only \$65. Once again Kraft hitched his star to a wagon. Behind a horse named Paddy, he peddled cheese from store to store. His was the first cheese wagon in Chicago. The important retailers usually drove down to the wholesale section to pick out their own cheeses. Kraft built a business taking care of the small fry. It meant getting up at four, eating a ten-cent breakfast, sleeping in a room for which he paid \$3 a week—the price including meals on Sunday.

Today Kraft's firm does an annual business of \$130,000,000 but he still gets up early. He's in his office most mornings at 7:15—a full hour ahead of his employees. He says he likes to see the sun come up.

At that time there was no nationwide cheese business. It was not practical to advertise a brand and distribute it nationally because the advertiser could not promise the housewife that she could get the same flavor twice in

succession. No two cheeses tasted exactly alike, even the same cheese didn't taste the same very long—it got sharper as it aged.

Cheese had to be kept in cold storage. Both the merchant and the housewife had to put up with waste and spoilage. Scores of men, dreaming of national markets, had tackled these defects and had been licked. They had tried cutting cheese into cubes and wrapping it in foil; grinding and packing it into jars; slicing, shredding and squeezing it. Kraft himself had run cheese through a sausage grinder, packed it in jars and sold it—until warm weather came on, causing the bacteria to grow, the cheese to swell, the jars to burst. This experience gave Kraft an idea:

Milk is pasteurized, why not cheese?

Why not kill the bacteria after they had done their work, thus halt the ripening and get a cheese that would keep?

Kraft had no scientific training, no laboratory—only an idea and the determination to push it through. Back of his store was an improvised kitchen. Here he put some cheese in an oatmeal cooker, heated it—and got a stringy mass which he threw away. The fats in the cheese had separated from the casein.

He tried cooking cheese fast, slow, with high temperatures and low. He tried cooking it wrapped in tin foil and then in jars with ingenious air vents. Nothing worked.

In 1913 a clue turned up when he wasn't looking for one. Making pack-



Modern pasteurizers carry on the work that Mr. Kraft began in an improvised kitchen



Clerking in Ferguson's store, James Kraft saved enough money to buy an ice business. Then there was no ice

aged Welsh rarebit—to sell off a supply of poor cheese from Holland—Kraft noticed that the fats did not separate and wondered if it was the albumen in the eggs. Kitchen experiments proved him right and in May, 1915, he was the first man to pasteurize cheese successfully. Then it occurred to him that, though albumen was perfectly harmless, the pure food people might object to anything being added to cheese. He had noticed that more stirring made the product smoother; was it possible

(Continued on page 78)

A-Shopping I Did Go

By LIDA C. LUECK

A TYPICAL housewife sets out with her market basket and learns that war can invade homes and pantry shelves

WHEN the "mis'ry" of my faithful, dusky Gladys turned out to be rheumatism, she decided to take things easy for a spell and go back to her family in Fredericksburg. We parted with real regrets. But, on sober second thought, I consoled myself.

The house was in order for the winter, the big Thanksgiving family dinner party was over . . . why not get along for a while without a maid? Why not?

"You've been grouching about the rising prices (so went my soliloquy) and the way your allowance seems literally to melt away . . . why not do something about it?"

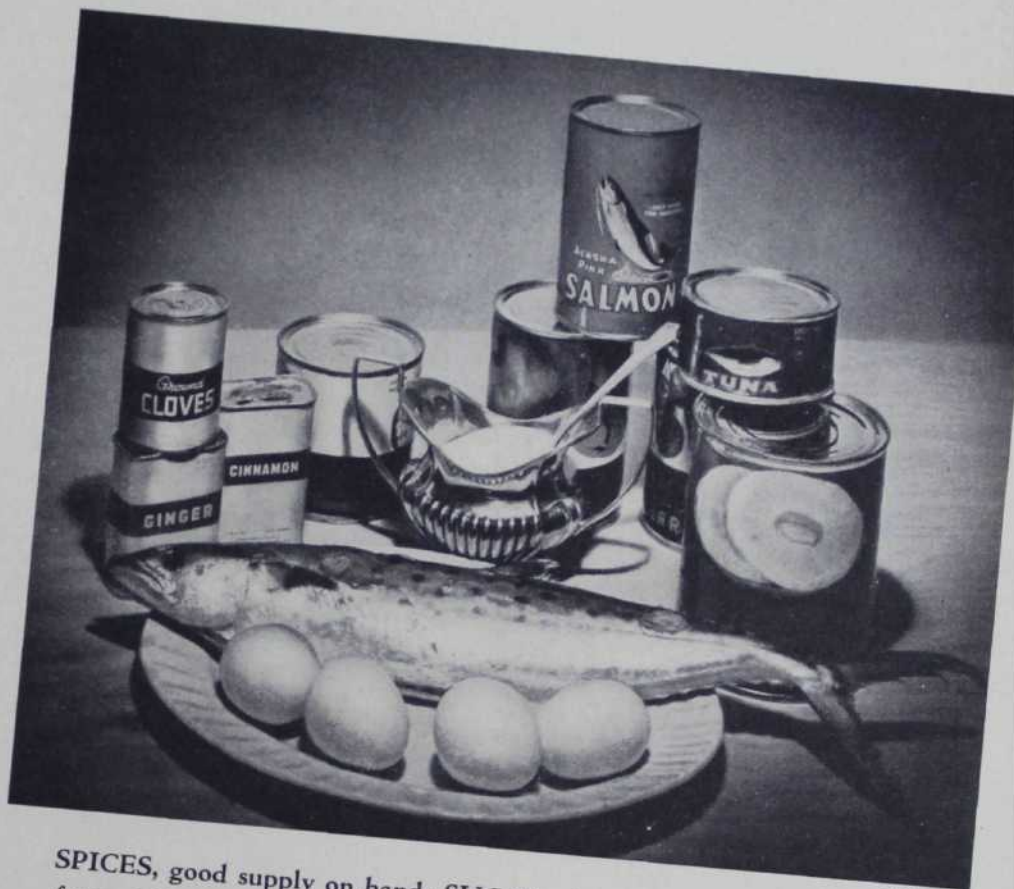
So I did.

I made some grand resolutions. I'd do my own work for a while. Think what I'd save! I'd plan vitamin-plus, but thrifty menus. I'd save the whole of Gladys' weekly pay and her carfare. It would certainly be far less expensive to feed two, instead of three. Why, in no time at all, I'd be waving a crisp and lovely new Defense Bond at the head of the family . . . bought entirely from savings.

My account would never (well, almost never) be overdrawn again. Maybe I'd be able to surprise the girls at the bridge club with that intriguing little number I'd been admiring in a downtown shop. . . .

The idea was good. We had the thrifty menus. I did my own work. But did I buy a bond out of savings? Did I get the new frock? Did I have a fat balance left from one allowance to the next? I did not! Now I've been keeping house for, lo, these many years and I refused to believe I was **THAT** dumb . . . something was wrong, and it wasn't all me.

I'd bought a few things for the house, the pantry was well stocked . . . but there had been no extravagances. Where did it go? Right then and there I decided Mr. J. Edgar Hoover's men were not the only investigators with work to do.



SPICES, good supply on hand; SUGAR, plenty if not hoarded; EGGS, fewer; CANS, getting scarce; SALMON and TUNA have gone to Britain; MACKEREL, plenty; PINEAPPLE came from Hawaii

I've learned much. I've been startled, appalled and made discoveries galore. While the head of the house may have his private woes with business priorities, I have my woes, too.

Practically all the things in my domain, the household, are more expensive, often not so good, frequently hard to get, and, what is more alarming, may soon disappear completely from the domestic scene.

Food prices explained

SO FAR most of my muttering has been about food prices. I shouldn't have limited myself! It wasn't only that the "six delicious flavors" in my market jumped from 14 cents to 19 cents for three packages, but all the other edibles climbed, too.

So I betook myself to my grocer, an excellent and conscientious merchant, and had a heart to heart talk.

His statements and comments about

the present situation have simply added to my respect for him and other food dealers.

Yes, we may have to do without some spices . . . those from India and the Far East . . . but just now there seems to be a good supply on hand. Would sugar go up . . . and up? No, he does not believe it will, if I and my friends and relations do not hoard it. Keep a good supply on hand and a little ahead is his advice . . . but don't hoard. He thinks the Government is doing a beautiful job of controlling prices on the whole and, although the maker, the distributor and the merchant are all paying more for food, they are *not* profiteering.

Remember that the Government is taking many supplies, is using enormous quantities of eggs and butter. That leaves less for the retail consumer.

Cans and the cost of shipping are great factors in the price of canned fruits and vegetables. Many travel

from California. We may come to glass containers. He even suggested the possibility, as a matter of morale, that the Government might take over beer and ale cans and use them for food containers.

Fish are going to war

WHY am I charged so much more for tuna, salmon and sardines, I wanted to know. This year's catch of salmon was high, but the tuna catch was smaller. Great quantities of these two fish have gone to Great Britain. Still more go to the Army and Navy. Naturally, the small quantity left is much in demand and the prices are high.

But there is plenty of mackerel . . . and mackerel is good, though not expensive. Lots of people are going to eat mackerel from now on. Little sardines from Maine and big ones from California will be plentiful, but imported

perience. If you find any, the prices are not noticeably higher. But try to find them! The Government has taken over the tin, they tell you.

I hope your garbage pail is in better shape than ours. If it isn't, you'd better do something about it . . . quick! Buckets, ash cans, garbage pails . . . all the family of galvanized ware . . . is from 50 to 60 per cent higher in price. But that's not all. From all indications, the time is rapidly approaching when these commonplace but necessary items will be no more. It is galvanizing, you know, which makes your container rust proof and seals the seams so it doesn't leak. We'll get pails and containers, but they'll probably be of sheet metal.

Those painted tinware gadgets . . . the stools, baskets and canisters we buy to match our kitchen color schemes, are up about 15 per cent and they're not only up, but on the way out. That good tin will have other uses.

Those handy little floor waxers are not going to be with us much longer. You may find one or two at your hardware store, but my man told me the allotment was exactly two gross for our whole city. The plants are being diverted to other uses.

So, if your waxer is done for, it looks like there'll be a little handwork at your house. Yes, there's still plenty of wax but the story may be different if there's a shortage of cans.

How's your stepladder? At my neighborhood store they didn't have one! How I am going to take care of mine from now on!

People who've had to buy bedding—that is metal bedding and springs—have found prices 20 per cent higher and the deliveries not only slow, but uncertain. Other home furniture has risen too, and merchants are wearing worried looks about future deliveries.

This time last year, good percales—and I mean good—were 22 cents a yard. Women all over the land use them for house dresses, children's frocks and aprons. Today they are 35 cents a yard. Why? Because of increased wages at the factory, because cotton is higher, because dyes are hard to get. There are good designs, but fewer.

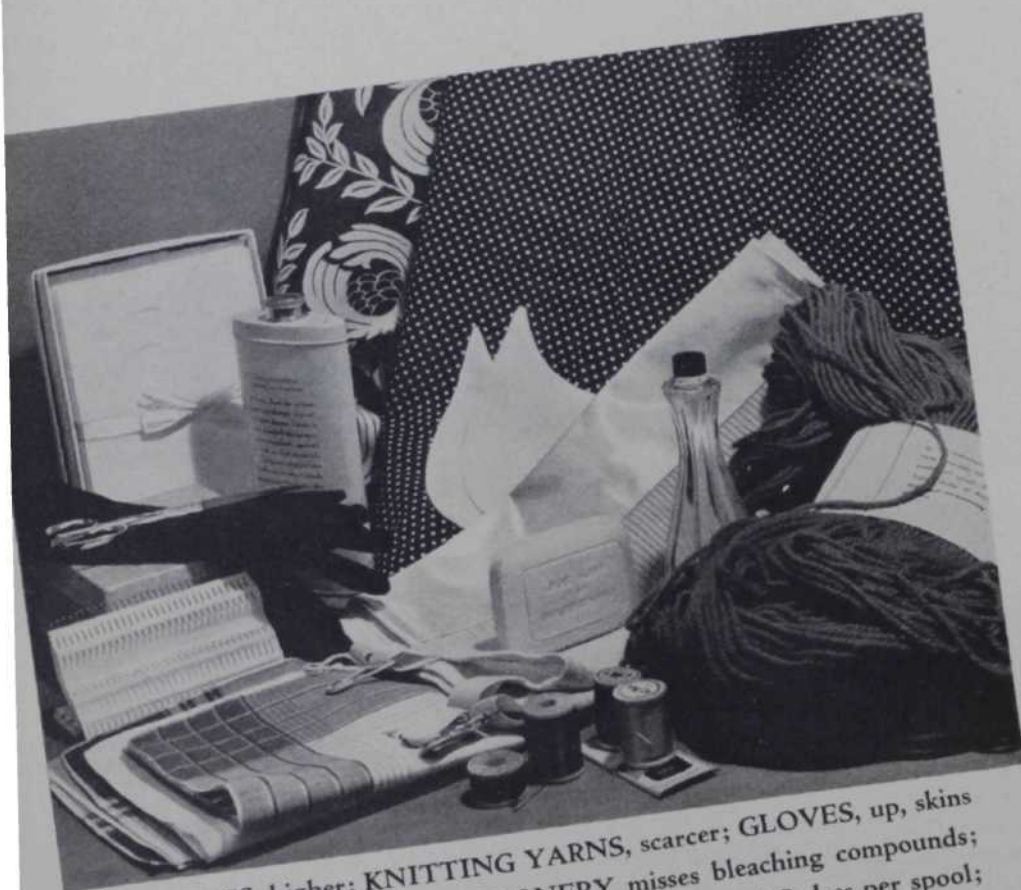
Fabrics will be higher

THAT'S more than a 50 per cent increase . . . and isn't that something to think about!

Japan, Germany, France and England, were, in their day, great producers of rayon yarn and it may surprise you to know that Japan led all the rest. However, our merchants expect no shortage of rayon, once our mills catch up with the production; and catch up they must, now that the overseas, warring nations are out of the picture. But . . . look out for price rises, because of labor costs, especially in rayon underwear.

When you go for your spring coat and suit, you'll find out about woolens. Already there has been a big jump. Not so big as cotton yet, but going up, definitely. And not only rising, but hard to get. The Government, 'tis said, is going to take up to 80 per cent (yes, you read the figures properly) of the whole wool supply for service uniforms and blankets. Of course we want the boys to be warm, but it doesn't leave much for the rest of us, does it? My advice is to take the best care possible of all your woolens . . . better look ahead to next winter's blanket needs.

Knitting yarns will be scarcer, too . . . and you'll find, in addition to the fine British and American yarns, a new collection from our South American neighbors. This is a new development, comparatively, and the "good neigh-



PERCALES, higher; KNITTING YARNS, scarcer; GLOVES, up, skins were imported; WHITE STATIONERY misses bleaching compounds; SCISSORS, going up; PINS, more expensive; THREAD, less per spool; DRESS SHIELDS may be rationed; TOILET GOODS used imported oils; MEN'S HANDKERCHIEFS were embroidered in China

sardines are luxuries. Pineapple products are grown and put up in Hawaii . . . you can draw your own conclusions about that fruit.

Have you tried to buy any curtain rods lately? It's an enlightening ex-

While you're checking, it's not a minute too soon to think about the hose to water next summer's garden. Rubber is scarce, hose is ten per cent higher and later on it's most doubtful if you'll get any.



How can a throat microphone help win battles?



Two microphones fit against the sides of his Adam's apple. He doesn't have to hold this "mike"—his hands are free.

This throat microphone is something new—made by Western Electric for the nation's air forces.

It picks up the vibrations from the flyer's vocal cords. Motor roar and machine-gun chatter don't get in to drown out his radio message. And the battle's outcome may depend on that message getting through.

This important device was developed by Bell Telephone Laboratories, pioneers in the field of aviation radio, and was made in the same workshop as your Bell Telephone.

It is among the many benefits which have grown out of Western Electric's long experience as manufacturer for the Bell System.

Western Electric

*... is back of your
Bell Telephone service*

bor" productions are not yet so fine, nor will they knit up so well.

Nylon, that wonder weave, is going to be used for more than hosiery. You'll find it in brassières, corsets, underwear and gloves. There is, right now, a ten per cent increase in the price of Nylon hose over last spring's prices, for instance, and the prediction is that there will be fewer colors in the months to come.

Buying handkerchiefs for my husband, I ran into some things I hadn't known. Yes, they were higher priced. Still linens . . . but so many, many more cottons. Embroidered and initialed ones are labeled, for the most part, "made in China." Today there are literally millions of yards of handkerchief fabrics in China, owned by U. S. manufacturers, to be embroidered by Oriental hands. But, if the war cuts off supplies, as undoubtedly it will, we may get embroidered things from Puerto Rico, where costs, though not high, are higher than China.

So handkerchiefs are going to cost more.

For years one of my pet, everyday gloves has been a soft, chamois-like fabric in a simple, pull-on style. They're made in Belgium. They used to cost \$1.50 a pair. Today they are \$2.25 a pair . . . and I learned that the enterprising Belgian had moved his factory to New York, where they cost more to make . . . which is why I pay half as much again for the same glove.

Handicaps on gloves

AS I looked at that glove, it began to dawn on me just where my money was going . . . or should I say, not going?

The lovely feminine hand may have fewer and less elegant coverings this year. American glovers turn out very superior products (and do you know that the center of the American glove industry is a little town up in New York?) . . . but there are certain insurmountable facts. The best skins, for instance, come from France, Spain and India, where herds are lovingly tended and skins expertly tanned. Nowadays such skins are hard to get. Added to that, American labor costs are much higher . . . with the result that there are fewer fine gloves and most of them more expensive.

Do you prefer white stationery? Then I'd advise

you to lay in a supply. Soon. Although costs have not yet gone up, I discovered that this industry is feeling the effects of the present world situation, because bleaching chemicals are needed to make snowy papers, and bleaching chemicals are being drawn into other uses.

It's always amazing to me how anybody can lose a pair of scissors. But they do disappear and when I went to the notion counter for a kind that had worn a \$1.05 tag the last time I bought them, the clerk said "\$1.20 please," for the identical size and brand. The only consolation I got was her statement that "Oh, yes, people are always losing scissors . . . they fall back of chair cushions and are mislaid in lots of ways."

But that was still 15 cents more than I expected to pay! I said I supposed now I never would get that pair of pinking shears I'd been promising myself and just for curiosity asked if they still had those \$4.95 ones I'd looked at not so long ago.

"They're \$5.50 a pair now!" was the answer to that.

Notion counters are treasure troves to every woman. She goes in to buy a few hairpins and maybe a card of those little safety pins and comes out with a bag full of stuff and the change from a couple of dollars. Well, from now on, if I'm any judge, her bag won't be so full and she won't get any change at all!

Zippers growing scarce

PINS . . . just plain, every day pins were 25 cents a quarter pound box. Now they're 30 cents. We are going to have more pin picker-uppers if I know anything. And zippers! Well, zippers are metal and metal has something to do with priorities. They've all gone up, too . . . 25 cent zippers are 30 cents and 30 cent ones are 35 cents. And that's not all . . . the well founded rumor is that when these are gone there will be no more. We're going to use plastic zippers.

When you're in the notion department you always need another spool of thread and you'd better get a couple of pairs of shields while you're here, you say to yourself. That's what I did and asked for the shields . . . a nationally known brand. There's an average rise of five cents on a pair and from now on the supplies of them from this maker are to be rationed all over the country. The little rubber girdle they made and sold for \$1.75 is now \$2.25 . . . quite a jump, don't you think?

The thread people thought they'd spare us another shock. They haven't raised prices. You can still get ten cent spools. They just cut the yardage. The label that once said 300 yards now says 250. And the spool that held 150 yards now holds 125. They blame it on labor costs.

Have you plenty of darning needles at your house? Well, if you haven't, take my advice and don't walk—run—right out and get some. The biggest store in my town has exactly two sizes and they make no promises when these are gone. Needles are made of steel. And I suspect there's going to be a little more plain and fancy darning, too.

From the notion to the toilet goods is a short trip . . . after you've virtuously bought your pins and shields, you usually decide

(Continued on page 61)



KITCHEN STOOLS, BASKETS and CANNISTERS, higher; FLOOR WAXERS, plants making other things; BUCKETS, ASH CANS, GARBAGE PAILS, higher and getting scarce; GARDEN HOSE, rubber goes into war materials

A Bridge of Ships

By R. L. VAN BOSKIRK

WHERE are we going to get the ships that will be needed to carry the fight to distant battlefields?

EXCEPT in time of national stress, shipbuilding has been America's step-child. We have been niggardly with our Navy even when we boasted of its strength, and apathetic about our merchant marine.

When Fighting Bob Evans made his trip around the world in 1907 with our "new and powerful" fleet (built mostly after the Spanish-American war had scared us into a naval appropriation) he had to hire Norwegian and Italian vessels as auxiliaries.

When the Merchant Marine Committee of the Chamber of Commerce of the United States was fighting—among others—for the passage of the Jones-White Act in 1928, most of the country was unconcerned, if not actually hostile. It did not remember the scramble that resulted when the beginning of the first World War found us with 90 per cent of our commerce carried in foreign bottoms. It didn't remember how desperately we tried to turn out ships then.

Apparently the public has no conception of the time, skill and organization necessary before a ship is ready for duty.

On December 8 a man walked into a Washington grocery store to buy cat food. As he laid down his newspaper to get out his money, the clerk's eye fell on the Pearl Harbor headlines:

"Mister," he said, "they gave us an awful trouncing yesterday but we'll pay 'em back. We'll build a battleship a day."

Too many people feel that way and shipbuilders know that such flattering confidence turns quickly to abuse. Because they aren't going to build a battleship a day.

A ship a day, yes. By midyear, two a day.

Considering that, from the end of the World War until 1938, only 35 ocean-going vessels, aside from tankers, were built in this country, that represents an almost unbelievable increase.



PARTRIDGE FROM BLACK STAR

Never before has this country been so well prepared to span the oceans with merchant tonnage in war time

Perhaps it is unbelievable to Hitler. Our marine accomplishments in the World War were unbelievable to the Kaiser. He did not believe the Allies could transport and supply an A.E.F. It did. Today cargo ships are being delivered in from four and one-half to six months after keel laying. That is about half the time it took to build in 1918.

As of September 1, 1941, there were 1,031 ships of 2,000 tons or more in

the United States' merchant fleet on the high seas.

When other belligerents entered the war, their inventory was: Great Britain, 2,529; Norway, 698; Germany, 579; Italy, 505; Japan, 873.

Today the shipbuilders are ready to add a tremendous amount of tonnage. Fulfillment of the original 1942 program would double the fleet's size.

Moreover, American shipbuilders probably were never so well prepared



Shipbuilders are employing mass production and pre-assembly to achieve almost unbelievable results. Nowadays they put on the prow of a ship like they once attached the radiator to an automobile, swinging huge sections into position with giant cranes

for an emergency as they are today, thanks to far-seeing men who realized when Europe began to smolder that, if this country expected to continue in foreign trade, new ships were necessary. Our merchant marine consisted almost entirely of world-war built ships. Only 30 per cent of our commerce was carried under the American flag.

Building a merchant marine

THEY decided to do something about it. The Merchant Marine Act of 1936 provided the machinery. A plan for building 50 ships a year for ten years was worked out and the shipbuilders got into harness again. Thanks to Admiral Land and his coworkers on the Maritime Commission no contracts were let to fly-by-night operators. For the most part, contracts went to plants with executives who received their training in old, established shipyards. As a result we already have 400 shipways capable of building ocean-going vessels at least 300 feet long. Two years ago, we had less than 100 and only an imaginative optimist could have seen possibilities for rapid betterment.

For example, the Bethlehem Fairfield plant near Baltimore was practically bare ground with four abandoned, useless ways in February, 1941; but, before the end of the year, the company had delivered a 10,000 ton ship, had launched seven and had ships under construction on ten ways.

That isn't an unusual story.

When President Roosevelt called for 200 Liberty ships early in 1941, the shipbuilders started seven new yards to handle the program. One of them, the California Shipbuilding Corporation, went to work to build an \$11,000,000 plant with 14 shipways on a 100 acre wilderness of weeds and marshes in Los Angeles harbor. At one stage of the work, six powerful tractors were mired in one mud hole. Thousands of loads of decomposed granite were hauled to give footing for the tractors. After that even seven days of continuous rain failed to slow up the effort.

On Feb. 3, 1941, the first pile was driven for the Administration building. Six weeks later it was completed. Before the end of March, the mold loft was ready for the template (pattern) workers. In May, the floors of two large warehouses were laid and the framework of the plate and structural shop was housing equipment.

Meanwhile the company, with only a nucleus of experienced shipbuilders, was scouring the neighborhood for workers. They needed 2,500 welders. They found 200. Shipfitters, helpers, marine electricians, shipwrights, machinists—all were at work somewhere else. Finally they went to the national defense training schools where inexperienced men

(Continued on page 58)



◆ JUST BETWEEN PRACTICAL PEOPLE ◆

ONLY IMAGINEERING WILL WIN THE PEACE

MAKING WAR is America's business, today. It is our sole business here at Alcoa. And whatever pride we might be inclined to take in production records is abashed before the sacrifices of the men who are out there, fighting.

Somehow we think American businessmen are going to be wise enough to see that winning the war is only the beginning of the job. Winning the peace is their task, too.

The number of men you can keep on your pay roll; and the number of new ones you can add to your pay roll, when this thing is over, is the real measure of how good a peace we have won.

As we see it, the only thing that will keep men employed, then, is a large dose of *Imagineering* right now.

We coined the word *Imagineering* to describe the audacious imagination, plus action, which is needed to outwit the future.

The plastics industry may think of Alcoa Aluminum

as a competitor. Yet there must be many things that plastics and aluminum could do better in combination than either could do separately. Finding out, now, what those possibilities are would be practical *Imagineering* to make new jobs.

The building industry may think of Alcoa Aluminum as something to make into a very good paint, or a super-super window. Let ten men in the building material field ask themselves the question, "Why is a house heavy?" and if they insist upon finding the answer they will likely come up with an audacious type of construction that will make ten new industries. There might even be some Alcoa Aluminum in the solution.

That's what we mean by *Imagineering*. It's a kind of flame lighting America to its future. Alcoa Aluminum is one fuel to make the flame burn brightly.

ALUMINUM COMPANY OF AMERICA, 2125 Gulf Building, Pittsburgh, Pennsylvania.



ALCOA ALUMINUM





Washington



and
Your Business



Putting it On the Line

MAYBE Lord Beaverbrook never heard of the old darky preacher. Maybe he has heard of him. He is the son of a Scotch Presbyterian clergyman and may have kept up with ministerial activities in other persuasions. At any rate he paraphrased the old darky's statement in his talks to American officialdom:

We're hair-hung and breeze-shaken over the Bottomless Pit.

Winston Churchill did a magnificent job of fevering up silk hat Washington, but Beaverbrook scared 'em. Report has it that he is not a tolerant listener, that he broke through the line of eloquence with desperately unpleasant statements of fact, and that he was explicit to the verge of rudeness. Churchill ran interference but it was the Beaver who carried the ball.

"My Goddlemitey" said "Beaver"

WITHOUT Churchill, official Washington would have welcomed Beaverbrook as an interesting and important visitor. He would have rated a lunch at the National Press Club, another at the Overseas Writers, and, if he had luck, would have escaped dining with some of the silkier hostesses of Washington. With Churchill in his corner he went in slugging.

"What are you doing about this?"

Some one had primed him with information about the basket picnic which has been going on in Washington and he did not like it. He has a high opinion of American industry but thinks it has not been channelled and directed by the Government.

"My Goddlemitey," he is quoted as saying. "We did the same thing. But you gotta snap out of it."

This Is Ahead of Us

INSIDE of another year, hotels will be charging for soap; paper-carded matches will probably be out;

they will not be given away; you'll have to ask for the second lump of sugar; you may have to pay a penny for the first; fuel rationing is a possibility; every European tells us we overheat our houses, anyhow; a "use" tax may be clapped on our radio sets; it won't bring in much money but it will condition us to the fact that the tax collector will be one of the family from now on; (don't you love that word "condition"?); ideological is another good word in Washington circles; tea is going to cost like sin; sin, in fact, may be cheap; rent control boards are certain in all war-work areas; tin cans will rate with pigeon blood vases in rarity; not likely that we will go short on canned goods, but the goods will be packed in glass; some new taxes are being thought up, including a manufacturers' sales tax, a federal tax on all firearms, and a boost of the federal gasoline take.



Down to Europe's Level

WHAT'S ahead is an inversion of the theory of Undersecretary of State Adolph Berle that rich nations must share their resources and opportunities with poor nations. The idea is born of the conviction that what we have called the American way of life—heated houses, two cars, two chickens, telephone extensions, two radio sets, bacon and eggs in the morning and rare steaks with cottage fries at night—will be made into a memory by the war. We will even go short on biology. Paul C. Glick of the Census Bureau says that in 1980 the American family will carry only one child instead of two. Dogs may be assessed on the French plan, which imposes a low tax on watch dogs, a much higher tax on pets, and an *ad valorem* on bluebloods.

A Long War and Hard

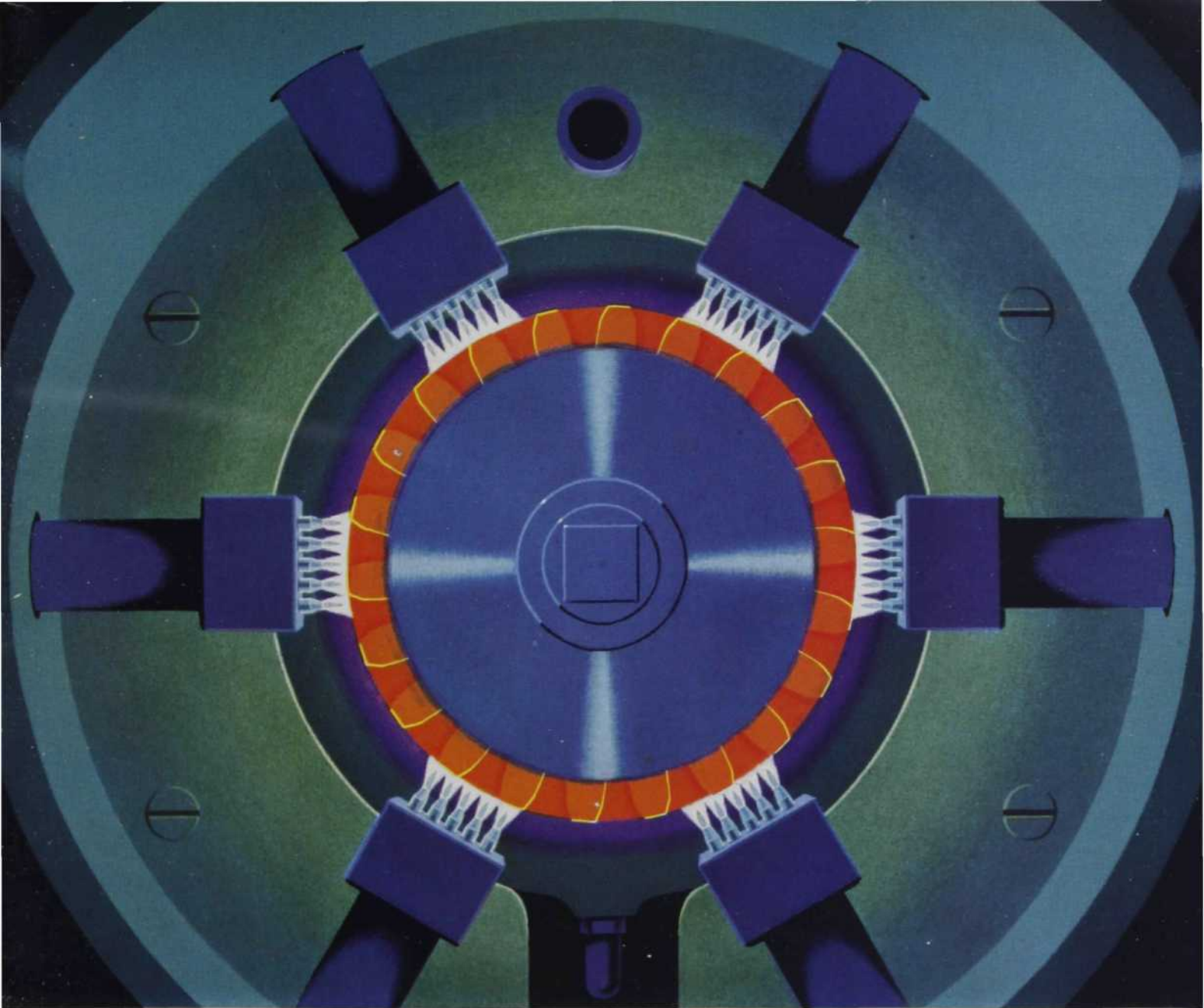
THE propounders of these ideas are not inspired by any distaste for comforts. Their argument is that we are in for a war that may last several years and squeeze off all our fat. We will lick the Japs, they say, for a number of strictly personal reasons, but it will take time, hard fighting, and a reversal of our naval strategy in the matter of battleships and planes. If we were to fail in this—which we will not do if it takes every dime and from now on—



we would lose access to the tin and rubber of the East, India and Africa would fall away from Britain and an enforced military alliance of the English-speaking countries would compel the partners to maintain heavy armament until the Third World War released them from their inferior position. That's the prospectus on which the immediate future is being offered.

Not All the Taste Is Sour

THOSE holding mildly divergent views admit that we are in for a long and tough war, but point out that we cannot carry enough food stuffs to England to run our own dinner tables short, if the Administration will only take the wraps off the farmers. We can raise enough sugar to sweeten the Great Lakes if Congress will give the nod. In another year our production of guns and planes will be equal to our expanded needs and is practically equal now to our



A SHORTER WAY TO LONGER LIFE

Spinning furiously in a bath of fire, gears that will play a vital part in the nation's production are given longer, more useful, more productive life...in a hurry. Through the swift magic of the oxy-acetylene flame, not only gears, but a host of other metal parts and articles can have their wearing surfaces hardened...exactly where hardness is needed to resist wear.

This is something *new* in metal working. The secret of it is that heat is applied so quickly and with such precise control...and quenching follows so rapidly...that any piece so treated has no chance to become hardened all the way through. This means that valuable properties like toughness and ductility are retained in the core of the metal.

The advantages of oxy-acetylene flame-hardening are manifold. By its use, hardening can be localized to those areas where wear will occur. Thus one section of a shaft, or the rim of a wheel, or the teeth of a gear can be hardened, leaving the rest of the piece in its original condition for needed properties or easy working. Cheaper and more plentiful ferrous metals can often be made to do the work of less readily obtainable steels.

The method is lightning fast, so it saves on operating expenses. Some pieces can be hardened in as little as five seconds. Production

is speeded up as costs go down. In many cases, machines can be simplified in construction by the use of flame-hardened parts.

Materials which can be flame-hardened include dozens of plain carbon, chromium, manganese, nickel, chromium-nickel, chromium-molybdenum and chromium-vanadium steels. High strength cast iron and pearlitic malleable iron can also be hardened by this method.

Linde supplies the oxy-acetylene equipment, also the oxygen and acetylene for use in the flame-hardening process. Inquiries about oxy-acetylene flame-hardening, flame-cutting, fabricating, and treating of metals are cordially invited.

. . . .

The important developments in flame-hardening—and other processes and methods for producing, fabricating, and treating metals—which have been made by The Linde Air Products Company were greatly facilitated by collaboration with Union Carbide and Carbon Research Laboratories, Inc., and by the metallurgical experience of Electro Metallurgical Company and Haynes Stellite Company—all Units of Union Carbide and Carbon Corporation.

THE LINDE AIR PRODUCTS COMPANY

Unit of Union Carbide and Carbon Corporation



GENERAL OFFICES: New York, N. Y. OFFICES IN PRINCIPAL CITIES



Masterpieces of Automotive Advertising

ARE PRINTED ON *Levelcoat** PRINTING PAPERS

Smart manufacturers of quality products reflect their products' value in carefully prepared advertising. No exception to this rule is the direct advertising produced by manufacturers of motor cars. It must be compelling, replete with life-like pictures in glowing colors. Type must be printed clear-cut. Catalogs, circulars, and brochures must say, "this is a quality product".

Naturally, motor car manufacturers, and many, many other producers of

highest-grade products, select Kimberly-Clark Levelcoat* printing paper to carry the messages that sell their merchandise throughout the land.

Step-up the appearance of *your* direct advertising by using Levelcoat printing papers . . . you can do this at little, if any, extra cost because *Levelcoat papers provide all the beauty*

of costly printing papers at the price of ordinary paper! . . . Levelcoat papers are for every type of letterpress and rotogravure printing. Available through paper merchants. Address our nearest

sales office for sample book. You are invited to call in a Kimberly-Clark technician to help you solve any paper or printing problem.

Compare Levelcoat Quality!

A

"A" is a diagram of greatly enlarged edge of old-style manufactured printing paper. Compare with "B".

B

"B" is a diagram of greatly enlarged edge of sheet of Levelcoat paper. Note the smoothness of both sides of Levelcoat paper. This smoothness is obtained by *new and exclusive* processes and is the secret of the unexcelled printed results obtained with Levelcoat printing papers.



Trufect*

For Highest-Quality Printing

Kimfect*

Companion to Trufect at lower cost

Multifect*

For volume printing at a price

Levelcoat Papers

KIMBERLY-CLARK CORPORATION, Manufacturers • Established 1872 • NEENAH, WISCONSIN

NEW YORK: 122 East 42nd Street • CHICAGO: 8 South Michigan Avenue • LOS ANGELES: 510 West 6th Street

*TRADE MARK

present needs. The rubber shortage, they say, is mostly outcry. We can run on what we have for another year and by that time, if government sets about it now, we could be making enough synthetic to carry us. We will be short of many things for a time, but we will not stay short. Radio, for example, uses aluminum like a thirsty horse drinks water. Already one lab has found 40 substitutes for aluminum and other metals used in radio and no one knows how many other labs there are. We are not the kind of people who will go back to wooden shoes and coal-oil lamps, no matter what the theorists think about it. Meanwhile we are getting busy in the job of licking the Japs.



Farm Prices Are Rising

ONE of the smartest real estate men known to this corner said:

There's a lively sale for small farms to city people, as hedges against the future. They do not plan to farm. If the cutworms didn't get 'em the tax man would. They just figure to live under their own vines and fig trees and scratch a few potatoes and scallions out of the garden.

Of course, prices are rising.

Please, Retain All Shirts

AT the Roosevelt-Churchill-Beaverbrook conference it was agreed that Britain and the United States would jackpot from now on. Each would put in what it had, with no thought of debts or credits. After the war a balance sheet could be struck:

"By that time we might all be in one big partnership," said one man. He is not one of the ride-and-holler breed which has been pretty prevalent in Washington, but is distinguished by hard sense. "Then there would be no debts."

We have taken on the biggest job any nation ever had in promising to be the arsenal and general store for three-fourths of the inhabitants of the world. Authoritative opinion—non-political—is that we can handle it if our energies are not diffused by flabby direction.

Plenty of Food, Anyhow

SENATOR Capper of Kansas reported that 2,000,000 acres of volunteer wheat must be destroyed in his state unless the A.A.A. permits the farmers to harvest it.

"Volunteer wheat," said the Department of Agriculture, "is just the same as any other wheat. We do not need it and do not want to store it. We have food reserves against any possible need. We will have plenty for the needs of starving Europe, if and when it becomes possible to ship it."

More peanut, soybean and cotton will be grown for the oil to make soap for Mamma's hands. Farm prices will spiral up, to be sure. The farm bloc in the Senate is seeing to that.

In the Look-Out's Chair

MEANWHILE it is not undercutting the war program—not the defense program any more; we're in there kicking and clawing—to observe that under cover of that program some of the old things are going on in the same old way. The Administration is planning the creation of a new Department of

Power. That would assemble all the power projects—R.E.A., T.V.A., F.P.C., and the Interior Department's multiple enterprises—under one roof. Dean Ickes of Interior hopes it will be his roof. Public ownership of the utilities would then be pursued under one flag instead of in the guerilla fashion of the past. Public ownership projects totting up something like \$1,000,000,000 are now under congressional consideration.

War Covers Multitude of Things

THE Rivers and Harbors barrel has more fat pork in it than usual. If the St. Lawrence power bill becomes law, a new government-owned line the President has ordered the Army Engineers to build to the new aluminum plant at Massena, N. Y., can be used to carry power to New York City, which is now being competently served by the Consolidated Edison Company. The plan to divide the country into watershed regions is again emitting sparks.

Plans are being evolved to force cities to accept public ownership by a squeeze play of F.P.C., S.E.C. and R.F.C. Alvin Roseman, assistant to Federal Security Administrator Paul V. McNutt, has said that it may be desirable to have federal city managers for some towns and cities, particularly in the South. When federal agencies now located in Washington are transferred to other cities, under the President's vast authority to reorganize the Government, federal control over the states will have been tightened.



This Is How It Works

TOMMY CORCORAN was asked by a Senate committee to explain the sources of his strange power over various government agencies. Mr. Corcoran's reply was that (A) he had no power and (B) he did not exert any.

But for nine years the report has not been contradicted that he had placed many young lawyers in government posts. Nor has Mr. Corcoran ever denied that he kept up his friendships. The lawyer writes the music for most government bureaus.

And in the meantime—

The Supreme Court affirmed, 5-3, "authority for federal administrative agencies to interpret and administer laws without judicial interference" in a decision upholding a ruling by the Interior Department's Bituminous Coal Division.



So, if Mr. Skeesicks—definitely not Mr. Corcoran, please—can control the lawyers of a government agency he can do as he pleases with it and the courts can go jump in the lake. If the reader is making up a dossier on the Supreme Court this might be added to the Hutcheson decision, which gave labor unions a blackjack and a green light.

Two Jacks and a Bowie Knife

TWO will win you five in the Cynics' Book at the National Press Club if industry gets anything better than a dogfall out of the newly appointed War Labor Board. They think, in fact, that the contest is in the bag and that Labor will not only get the closed shop it is asking for, but will get at least one leg on the cup in which is hidden its plans to socialize

industry. The cynics like to protect themselves, though. They say that any resemblance between the present labor board set-up and any of the previous devices is purely coincidental. Then they mutter that an Arkansaw flush is being used in the game.

Looking under Another Shell

PURSuing this same deplorable turn of thought the watchers observe that they were at first fooled by a decision of the Supreme Court, which seemed to grant the employer more latitude in talking to his men. It seemed, they say, that an employer might even say to his men:

"I hope you will not strike."

On more diligent inquiry it appears that if the employer has at any previous time lost his temper when he was taken for a ride by a labor racketeer the N.L.R.B. may take this into consideration as a background against which today's muted utterances may be read. Moral seems to be that employers should not fool themselves about that decision of the Supreme Court.

"We Have Nothing To Do With Apples"

SMITH Law Smith of Virginia called on Sidney Hillman, the labor chief of the O.P.M.

"We have nothing to do with apples," said Hillman to Smith.

Yakima, Wash., fruit farmers declined to enter a closed shop agreement with the okie apple pickers' union. Farmers, wives, school children, neighbors picked and barrelled apples and shipped them to Chicago.

The okie apple pickers' union called on the Chicago Teamsters' Union to boycott the Yakima apples. So they rotted.

So now you know.

Bright Gleam of Light

MEANWHILE "Cap" Krug, O.P.M.'s engineer in charge of utilities, caught the R.E.A. in unwarranted possession of 20 carloads of copper hidden in the sagebrush contiguous to Possum Kingdom dam in Texas. Krug needs all the copper that can be spared from war uses for the imperative necessities of utility and communications lines.

The R.E.A. had planned a transmission grid which—according to allegations—would serve one half as many co-ops as a privately owned utility and at eight times the use of copper.

"When 'Cap' Krug ran interference for Wisconsin U. he was homicidal but never harsh," said an admirer. R.E.A. has promised to be good.

If "Beaver" Has His Way

BEAVERBROOK at least partly sold to the Administration the British plan of industrial control. By this certain factories are assigned to handle civilian needs in certain industries and the other factories in the line are turned into war work.

Reluctant individuals can be controlled by the rationing power. Use of the plan will be dictated by events and needs.

Walking in a Haunted House

NOTHING has been done in the past year which was received with such joyful outcries as the appointment of Donald Nelson as War Czar. All the ink-stained

wretches, all the public men so far as heard from, all the business men and industrialists stopped grieving over what has been going on in Washington long enough to cheer. Nelson is known to be a good man. He asserted authority in S.P.A.B. which was not his and actually got things done. He knows production and distribution, he can say yes and stand by it, and the first thing he did was to announce that the war program would begin to jingle no matter who was hurt.

Every one agrees that he will and can do these things if he isn't interfered with. But, if he must get his deeds and words okayed, then the new set-up is just another sample of the old shuffle. The house is filled with the ghosts of committees which started well, said lovely things and died like little gentlemen without a word of reproach. The sentiment of the people was shown when Nelson's appointment was made.

The feeling in Washington is that, if he has enough behind his belt buckle to insist on being boss of production, everything will be O.K. But it's up to him, Washington thinks.

Heard in the Cloakrooms

LOWELL MELLETT did not want the job of censor, which was wished on Byron Price of the AP. . . . Mellett is an ace in propaganda and as shepherd of the movies can make that industry snap like a whip. . . . Price will get more actual news into circulation than we have been getting. . . . If he can. . . . The public is complaining that too much news is being pre-digested for it. . . . Yet if Price lets the wrong thing slip through the teletype he will be this war's George Creel. . . . Those who remember will admit that Creel only made two or three mistakes. . . . He's been pinned to the door ever since. . . . Brookings Institute shows precisely how more than \$2,000,000,000 of non-essential spending can be cut out. . . . Congressional idea is to let the tail go with the hide. . . . J. Edgar Hoover and his F.B.I. snapped up 2,944 "dangerous" aliens. . . . He has fingered 5,000 others. . . . C.A.A. designated 385 war airfields. All now completed or under construction. . . . Also has supplied armed forces with 12,000 trained men and 2,800 instructors. . . . Nathan Straus's U.S.H.A. reports that your chance of hurting yourself in a public housing dwelling is as one to 15 in a natural home. . . . Maybe the taxpayers are dizzier. . . . Leon Henderson may ask for a horse-thief law to deal with tire stealers. . . . But he has been getting along first rate without any law to speak of. . . . Secretary of Agriculture Wickard is resisting Henderson's plan to clap limits on farm prices. . . . He thinks it is silly to ask farmers to produce all they can and coincidentally tell 'em they mustn't make a profit. . . . When President Roosevelt reported to the nation on the tanks and planes we are to build he might have offered a flower to the machine tool people. In 1941 they turned out eight times the annual average for the past ten years and each unit was three times as efficient as the average machine tool of a year ago. . . . And without machine tools we would get no battleships and no planes. . . . One might almost say no microphones.



Herbert Corey

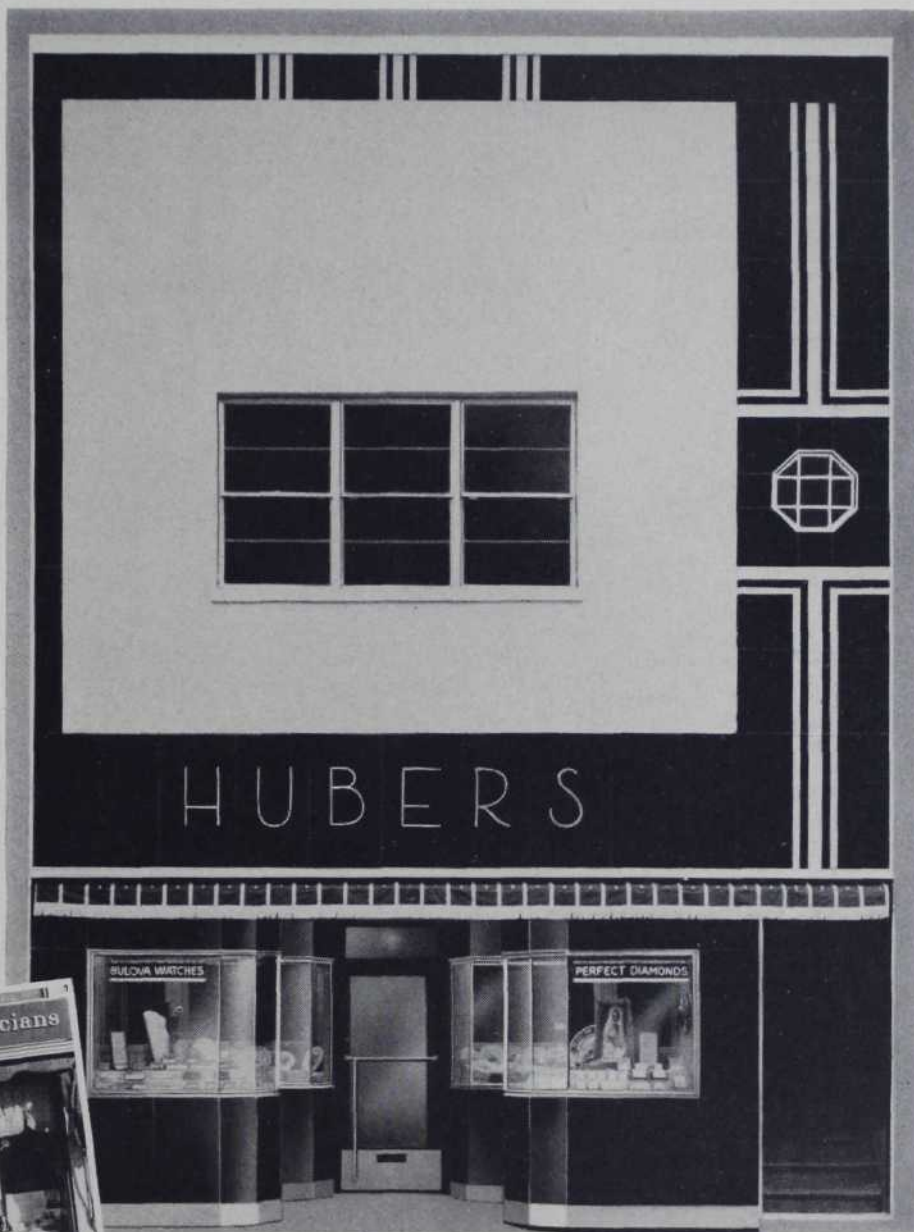


There's never a dull moment in the store with a Pittco Front

STORE ACTIVITY ZOOMS when you remodel with a modern Pittco Front. Old customers renew their allegiance and new ones bring you their trade— attracted by the smart appearance of your Pittco Front. Strangers in your community choose your store as a matter of course—because the shining Pittco Front tells them that your goods, your prices and your service will please.

IN SMALL TOWNS and cities all over the country merchants are finding Pittco Fronts the way to increased revenue. Fill out and mail the coupon below. You will receive, absolutely free, an illustrated booklet describing in detail some of the many Pittco Store Fronts which are proving good business-getters today.

WHEN YOU BUILD, we recommend that you consult an architect to make sure of an economical, well-planned job. Our experts will cooperate with him gladly in working out a Pittco Front to suit your individual needs. If you wish, you can pay for your Pittco Store Front on the Pittsburgh Time-Payment Plan—just 20% down and the balance in payments out of profits. A similar plan can usually be worked out satisfactorily with the cooperation of local banks.



A BUSIER STORE results when you install a new Pittco Front. You can see by this store in St. Joseph, Mich., how an inviting Pittco Front can improve the appearance of a store and increase its popularity with shoppers. Architect: Homer Harper.

PITTCO STORE FRONTS

PITTSBURGH PLATE GLASS COMPANY

"PITTSBURGH" stands for Quality Glass and Paint

Pittsburgh Plate Glass Company
2216-2 Grant Building, Pittsburgh, Pa.

Please send me, without obligation, your new, illustrated booklet, "Pittco Store Fronts — and Their Influence on Retail Sales."

Name.....

Street.....

City..... State.....

NO BUSINESS *Can Escape* CHANGE

Business keeps its hand in at making novel things by turning out new and better aids for the war effort

1 • AN ULTRA-VIOLET tube is now made in a four watt size for use on instrument panels with fluorescent markings to make the marks show plainly without distracting visible light. Designed for airplanes, they may be adaptable to many other uses.

2 • A CRAYON is now made which gives a temperature-indicating mark on various materials to be heated to specific temperatures. Available for various temperature intervals between 125 degrees Fahrenheit and 1600 degrees they leave a chalk-like mark which, when heated to the specified point, melts sharply into a liquid streak.

3 • FAUCET WASHERS of synthetic rubber are now made which are said to outlast natural rubber washers many times, particularly in hot water faucets subject to much use.

4 • A CATHODE-RAY oscillograph is now made with a 20 inch diameter intensifier-type cathode-ray tube. This "giant-screen" instrument is particularly developed for lecture-room demonstration and for more critical laboratory studies.

5 • A NEW TYPE of electromagnetic gage to measure strain on machine parts subject to sudden loads has been developed for such machines as punch presses, shears. It can be adjusted to show a direct value of the maximum amount of strain, or a light or bell may be attached to give a signal when a predetermined amount of strain has been reached.

6 • A BLACK-OUT PAINT for darkening windows and skylights of industrial and commercial properties is now made in paste form. For use it is cut 50 per cent with water and can be sprayed or brushed. For interior applications it can be covered with white paint to give better interior light reflection.

7 • FOR ABRASIVE blast nozzles there is now made an extremely hard, abrasion-resisting ceramic insert. It is economical in first cost and wears well.

8 • A DEMAGNETIZER for drills, tools, and the like makes easy the removal of metallic abrasive particles and fine chips. It is portable, light weight, and can be used over heavy, bulky work.

9 • AN AUTOMATIC shut-off valve for gas lines operates from line breaks or dangerously low or high pressure and also from explosions, earthquakes, or fire at the valve. It is reset manually.

10 • A HOT STAMPING machine is now available for marking graduations on sleeves for binoculars and similar articles. In one operation, the mark or stamping is made and the white filling is applied. Without heat the machine may be used for cold marking of similarly shaped parts.

11 • CAPS are now made of a heavy porous paper printed to resemble linen. Safety slogans or other messages may be imprinted on them. They are adjustable to any size.

12 • FOR THE PIPE smoker there is now made a flexible filter woven of glass yarn to be inserted in the pipe bowl. It does not affect the taste, filters out particles of tobacco that might get into the stem, acts as a wick to burn juices collecting in the bottom, aids in building up a sweet, even cake.

13 • A NEW TYPE inspectors' hand stamps is available with single letters in distinctive border designs, such as squares, circles, triangles. By assigning a specific letter or border to a department, both the department and the individual inspector may be quickly located without memorizing a long list of elaborate individual designs.

14 • ONE HUNDRED new symbols have been added to a line of inspectors stamps. They are designed so that a small number may be included to represent different shifts on the same inspecting operation.

15 • A SELF-CONTAINED dust collector is now made with a grinder for tools or small work. The collecting and filtering mechanism is in the base of the grinder.

16 • PENCILS are now made with a plastic ferrule to replace the conventional brass ferrule that holds on the rubber.

17 • PLASTIC STRIPS replace aluminum for edging on divider cards of a card index system. They are easily fastened on the cards and they are less noisy than metal.

18 • A NEW adhesive for applying waterproof paper and other black-out materials to glass, metal, wood, etc., can be sprayed, or applied with brush and acts also as a shatterproofing agent on windows.

19 • A LIGHT bulb said to give fair visibility for interior use during blackout has a silver reflector lining and a black coating down to the tip of the bulb which is a deep blue. The light is a soft beam of blue light and projected downward.

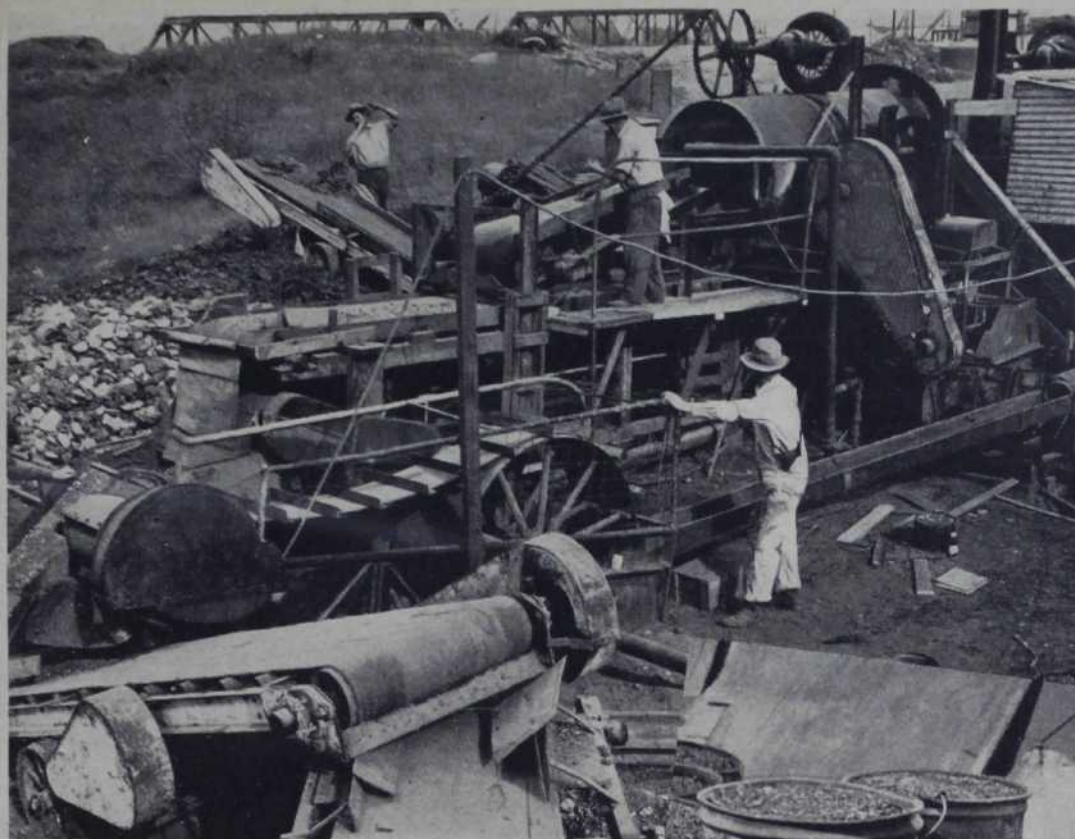
20 • LOW visibility paint made in green, tan, black and intermediate shades that is also good in reflecting infra-red rays is now made for camouflaging industrial plants, tanks, and other items that require not only poor visibility but good heat reflection.

—W. L. HAMMER



21 • DECORATIVE black-out draperies are now made in several patterns. The drapes have a tightly woven black lining so that light will not show through. They may be tied back in the usual manner or a heavy rod at the bottom hem and tabs on the sides will hold them closed.

EDITOR'S NOTE—This material is gathered from the many sources to which NATION'S BUSINESS has access and from the flow of business news into our offices in Washington. Further information on any of these items can be had by writing us.



PHOTOS BY PAUL DORSEY

This amazing contraption, operated by six men, handles 100 tons of junk daily and salvages 1,500 pounds of salable metal

Ray Bunch, one of co-designers of the machine, with a basket full of salvaged cutlery. Buckets contain fine metal ready for refining

Midas of the Junkyard

GOLD, we're told, is where you find it. Hearty subscriber to this belief is Arthur W. Hudson, Los Angeles. There he finds his gold in the last place most people would look. He mines it from a rubbish dump!

Mr. Hudson is owner and operator of the Commercial Sand Blast Company. Across the street from his plant is a rubbish dump where refuse haulers have been dropping their unglamorous cargoes since 1900.

Time after time, in recent years, Hudson had seen amateur explorers emerge from the rubbish pile, jubilantly clutching articles of value. Finally he called in his chief engineer and they devised a means of cashing in on the junk heap.

What they have come up with, after months of mildly-successful experimentation, is a contraption which might well be from Rube Goldberg. It's the dangedest machine ever built. They haven't thought of a name for it yet, but it functions beautifully.

Working on the basic principles of placer mining, this anomalous mechanism devours the junk in its raw state, digests it thoroughly, and discharges it in four different forms: coarse junk, medium junk, fine junk and no-good junk.

The raw material is dragged onto a conveyor and fed into a revolving cylinder,

where it is washed and initially screened. From here, the "ore" is carried over screens of varying meshes and beneath electromagnetic devices until finally, about 100 feet from where it started, any junk remaining on the conveyor is strictly junk. At the end of the line it is ejected, loaded into trucks, and hauled off to some less-noteworthy dump. Meanwhile the worth while material has been retained and graded by the machine.

Watchful eyes and hands of a six-man crew pick out objects of unusual value as the agglomeration passes through the machine. These pieces include coins, medals, badges, organization pins, watches and precious-metal ornaments. The mine has produced a surprisingly-

large number of coins—chiefly, and unaccountably, Chinese. Most valuable discovery so far is a lady's platinum watch-case, set with 12 cut diamonds. Sections of gold bridgework turn up now and then, too, bolstering profits considerably.

On its present schedule, for a ten-hour shift, the machine is producing 1,500 pounds of salable metal a day. In the main, the salvage consists of copper, lead, tin and iron, bringing eight cents a pound.

Comprising two and a half acres, the dump is estimated to contain 250,000 tons of workable material. This is being mined at the rate of 100 tons a day, so it looks as if Hudson will be able to go on with his novel venture for some time to come.

—RICHARD HANNAH.



The MAP of the Nation's Business

By FRANK GREENE

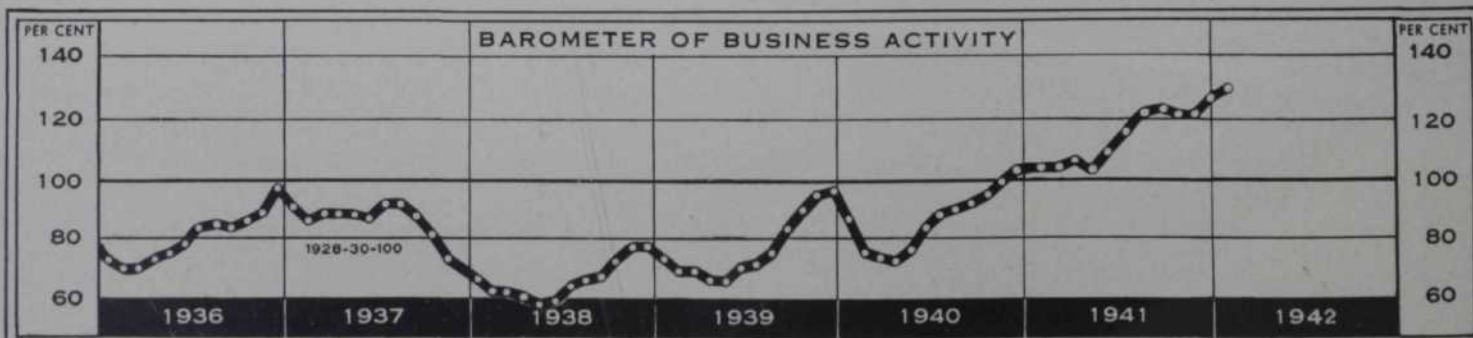


THE ADVENT of war as the month opened accelerated the swing to all-out armament production. Military needs absorbed 70 per cent of December's steel capacity, while output was only slightly below the October record, despite scrap and pig iron shortages. Restricted use of rubber reduced automobile output quotas as plants rushed conversion to full arms production. Expansion of productive capacity featured shipbuilding, aircraft and machine tools. Railroad carloadings and earnings were highest since 1929 and priorities for equipment were granted to meet 1942 needs. Despite West Coast blackouts, electricity output recorded three weekly all-time peaks.

War news drove stock market prices to three-year lows, while transactions doubled in volume. Private construction continued to dwindle and engineering awards fell 32 per cent below December, 1940.

Agricultural commodity prices reached 12-year highs notwithstanding near-record crops.

Expanding war production and mining activity, coupled with good crops at high prices, create improved income the country over



Although retail distribution failed to come up to early expectations, the record pace of industrial activity was well maintained in December and the year ended with the Barometer chart line at a further new high level

ALL WE CAN DO . . . ***for all that America means!***

There'll be many an enemy bomber downed, many a menacing tank stopped in its clattering tracks, many a hostile vessel sunk, through the micrometric accuracy of American craftsmen.

For today's battles are won at lathe and desk and drafting-board, as well as at the gun-breech and bomb-release.

In your peaceful service, America's aircraft and automotive industries developed the superb skills that are such priceless assets in this hour of need. As a vital part of these great industries, Bendix has enlisted with its loyal army of more than *forty thousand* employees, in devotion to our One Big Job—victory.

Bendix Products embrace aircraft carburetion, ignition, electrical units, instruments, radio and landing-gear. They include guns and gunfire controls, a vast array of ship equipment and vital components of nearly every tank, truck and scout-car.

We're building our best into each . . . with all our hearts . . . for all that America means.

★ ★ ★ *Bendix* ★ ★ ★

AVIATION CORPORATION

Serving the cause of Victory in twenty great plants spread across America from the Atlantic Seaboard to California

A Bridge of Ships

(Continued from page 46)

were trained in the necessary shipyard trades. From this zero beginning the Calship Company built up a force of 15,000 workers who launched their first ship in nine months. Six others are now in the water being rushed to completion.

The other emergency plants: two more on the Pacific Coast, three on the Gulf of Mexico and three on the Atlantic, have comparable records—mud flats, mass production, inexperienced labor.

Emergency but practical ships

THE Liberty, or emergency, ships which these plants turn out have been called the ugly ducklings of the marine world. Shipbuilders don't like the word "ugly," although it may not be such an inappropriate term. After all, the ugly duckling turned out to be a swan.

If, as President Roosevelt declares, we are to hit Heil Hitler and Honorable Hirohito wherever and whenever we can get at them, these vessels will make up an important part of the 8,000,000 tons of shipping that we must build this year.

About half again as long as a football field, each Liberty will carry some 10,000 tons of cargo and a crew of 54 officers and men. The fact that they can be built in four months implies no lack of seaworthiness. The ships will do 11 or 12 knots and ride gracefully through the waves. Cargo gear is simple to operate and designed to meet handling difficulties in ill-equipped foreign ports. Steam-driven winches are used throughout.

Similar in design to the 60 emergency ships which Todd shipyards are building for the British, they can be handled by British as well as American sailors and can be easily repaired in any world port.

Chief difference between them and the Maritime Commission's long range program ships is in the engine. Tightest bottleneck in the construction of large vessels, both naval and merchant, has been inability to get enough turbines and reduction gears. Turbine blades must be worked to an almost razor edge, and huge gears by which the propulsion power is transferred to the drive shaft must mesh to a hair's breadth. It takes time, experience and skill to produce that kind of machinery. It would have been impossible to provide this advanced type of propulsion machinery for the new fleet without disrupting the naval and long range ship program.

So we get an early lesson in substitutes. Can't have turbines—what then? Why, reciprocating engines of course. Older ships have been using them for years. Numerous manufacturers can produce them in quantity. Chief difference is that power is applied directly to the drive shaft rather than through reduction gears. Maybe speed and ease in handling must be sacrificed, but they will certainly do in an emergency. So the order went out to equip all Liberty ships with reciprocating engines.

By January 1 two more yards had been added, four ships had been put into

service, 23 were launched and 79 others were on the shipways in the nine emergency yards. In addition, the Todd Shipyards have made a good-sized dent in their contract for similar ships for Great Britain.

However, the Liberty builders have no monopoly either of speed or ingenuity. Back in 1939 Robert L. Ingalls set up a new plant at Pascagoula, Miss.

Builders remember Mr. Ingalls as the man who, many years ago, built an all-welded tanker which performed so well during a storm on its maiden trip that it was converted into a Great Lakes ice breaker. He is particularly proud of his success in selling the idea of all-welded vessels to the Commission when some of the experts turned up their noses. He even talked them into making design changes after the bids had been let so that he could produce a 100 per cent welded ship.

Ingalls says that a ship built by the all-welded process saves hundreds of tons of steel, increases cargo capacity and speed, decreases fuel consumption and provides greater maneuverability. An all-welded ship is actually one single piece of steel without a rivet or bolt. Welded joints are not only much stronger than riveted joints, but they eliminate lap joints and provide a smooth-skin hull which helps to reduce friction.

A hull in one piece

SOME folk say that welding is the most advanced step in shipbuilding since introduction of the steel hull. The process is fairly simple. Plates are placed edge to edge with one-sixteenth of an inch between them. A machine shoots an electric arc where the two steel plates meet. In the opening between them metal is deposited from a thin welding rod. The electric arc generates such a high temperature that the edges of the two plates and the metal in the rod melt into one single mass of steel.

It is pretty generally recognized that a welded ship is more able to withstand collision shock. A riveted seam is likely to bulge or tear and open up. A welded seam is stronger than the steel plates themselves—a welded joint will bend without springing a leak.

While Mr. Ingalls has been perhaps the most articulate devotee of welding, all other shipyards have applied the technique in varying degree. It has been a prominent factor in aiding speedy construction. The job requires only a welder and his helper, while a riveting job takes three or four men. There are even automatic welders which are placed on little carts that go up and down the seam of a ship and virtually "melt" the hull into one solid slab. In most yards a combination of riveting and welding is used. The Liberty ships are 85 per cent welded.

Pride of the Ingalls workers is wrapped up in three luxury liners of about 10,000 tons deadweight originally

intended for the American-South African line. The first, *African Comet*, made her trial run a few days before Christmas. Built at a cost of \$4,800,000 she is the first all-welded passenger vessel ever built, has a 17,000 ton displacement and can do 18½ knots loaded. The ship was completed in 16 months.

These vessels are only part of the Ingalls contribution. Some 50 ships, barges and other types of vessels, are now building in this yard and another nearby.

Like an assembly line

BUT the Ingalls Company has no monopoly on ingenuity and adaptation of new methods. It would seem almost impossible to apply mass production and pre-assembly to anything as big as a 10,000 ton boat, but all of the larger shipyards are doing it. For an example, there is the Moore Drydock Company near Oakland, Calif.

The Moore Company is building 10,000 ton ships for the Alcoa line to haul bauxite from Latin America. The old way was to put together hull plates, double bottom, deck plates and bulkheads one at a time on the ways. Now all these sections are assembled on the ground in various places, carried by crane to the proper location and then fitted together.

This method has contributed tremendously to a general speed-up. For example, the bow of a ship, particularly if it is bulbous, calls for much careful fitting of intricately formed plates and shapes. It is a time-consuming job and, when the work was done entirely on the ways, could not be started until the major part of the hull was well along. Under the pre-assembly method the completed bow can be picked up and attached to the hull whenever it is ready. The same principle applies to other sections. In addition, many more men can be working at the same time.

The Alcoa ships, with accommodation for 60 passengers in addition to cargo, are bigger, faster and smoother than the ships that have been serving Central American ports for years. They have high pressure boilers and steam turbines which means that the engine room takes up far less space than in the old type ships. With increased speed and increased cargo space, each ship can do almost as much work as two of the older vintage.

There is another type of cargo vessel that has become of increasing importance since gasoline became the chief motivating power of armies. A German sub captain is just as elated over a torpedoed tanker as a Northern Lakes fisherman is over a musky. Oil is the most important cargo on the ocean, next to soldiers.

How shipworkers have answered the challenge for more and better tankers is illustrated by an incident at the Bethlehem Fore River Yard. When the *Sinclair Superflame* was launched on September 27, 119 days after keel-laying, one of the employees remarked that they would show that they could build ships faster than they could be sunk in the Atlantic. His group picked up the enthusiasm. When the keel of hull No. 1491 was laid two days later, they adopt-

WE-ALL

The Japanese attack on the United States instantly changed our trend of thought in this country.

Before that attack some of us thought in terms of "I", others in terms of "we". Neither of those terms expresses our feelings today.

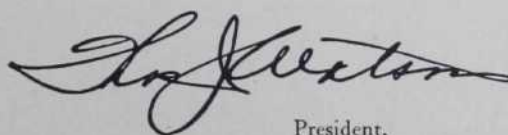
"I" represents only one person.

"We" may mean only two or a few persons.

Our slogan now is WE-ALL, which means every loyal individual in the United States.

We are facing a long, hard job, but when the United States decides to fight for a cause, it is in terms of WE-ALL, and nothing can or will stop us.

President Roosevelt, our Commander-in-Chief, can be certain that WE-ALL are back of him, determined to protect our country, our form of government, and the freedoms which we cherish.



President,

International Business Machines Corporation

ed the slogan, "Let's launch '91 in 90 days." Soon everybody on the job was infused with "'91 in 90 days" spirit. Even suppliers of equipment took up the slogan and geared their activities accordingly.

The men who started this movement underestimated the possibilities in this kind of zeal. In one week 1,000 tons of steel were erected, a record in itself. The ship was actually launched in 63 working days or 76 calendar days as compared with 119 calendar days, the best previous time for a ship of this type. The ship, a 12,700 deadweight ton vessel, with a 94,759 barrel capacity, was actually delivered three months after keel-laying.

Ingenious methods of launching

AS IN the case of many ships launched at the Fore River Yard, battleships as well, the limited extent of deep water off the ways requires the use of braking devices. For launching the tanker, 182 tons of chain were required. On each side of the vessel were two drags of nine tons each, two of 14 tons and two of 22.5 tons. Each pair of the same weight was connected in tandem to a single wire rope drag line, three lines being attached to each side of the vessel. Drags came into action, symmetrically, on each side of the vessel.

The Sun Shipbuilding Company has also made some remarkable records in tanker construction. Even before war was declared, they worked three shifts on bottleneck operations such as erecting steel. Here again automatic welding has contributed to production speed, but launching ships at an earlier stage of production is perhaps an even greater factor. By doing more work in wet basins, Sun has managed to get 25 per cent more use out of their building ways.

In some yards the extent of deep water would not permit end-launching. Pusey & Jones of Wilmington, Del., obviously couldn't end-launch 415 foot vessels on a river that was only 400 feet wide. So they built side-launching ways. In President Spieghalter's opinion the new ways are as good, if not better than the older end-launching method.

Granted that most of the foregoing accomplishments will increase our Merchant Marine rather than our fighting ships, the importance of merchant tonnage as part of our war effort cannot be overestimated.

Reporting to Woodrow Wilson in World War days, Bernard Baruch declared:

"We must assume or work out on the basis of *ocean tonnage* our maximum military participation."

Today the situation is far more serious.

A glance at the map will sober up any Pollyannas who might be under the influence of "we-can-do-anything" cock-tails. In normal times it takes nearly a month for a 12 knot cargo ship to make a turn-around trip from New York to Liverpool; two months for a similar trip to Sydney, Australia; Rangoon is one-third again as far as Sydney; and, at present, the Red Sea trip via South

Africa and return is taking about five and one half months. Fantastic as it seemed a few years ago, these or other equally distant routes may yet be swarming with U. S. boats carrying supplies and possibly, doughboys. There are few transports that will carry as many as 5,000 soldiers; airplanes, tanks, cannon and other military stores are bulky cargo. Ships traveling in convoy are always slowed up by the plodders. Other ships will be needed to bring us such raw materials as manganese, bauxite, copper, coffee and other needed items. It is not easy to plan the logistics of a World War when water is the main highway, even if there were a surplus of boats.

Captain Vickery of the Maritime Commission sums it up like this:

"It may well develop that the O.P.M. will have to cut its cloth to fit the shipping skeleton."

Amplifying the Captain's figure of speech; if shipping is the skeleton of our war effort, fighting ships are undoubtedly its sinews. In that field, too, private shipbuilders are contributing everything from battleships to motor torpedo boats.

In normal times, it takes four years to build and fit out the hull of a battleship. But the Bethlehem Steel Company's Shipbuilding plant laid the keel for the *Massachusetts* in July, 1939, and launched her in September, 1941—seven months ahead of schedule. While she was sliding down the ways, workmen laid the keel for a new cruiser on the same spot.

Of course the *Massachusetts* isn't ready to go gunning for Japs or Boche—as yet—heavy armor must be put on, gun turrets erected, wiring installed and various other fittings provided. A battleship is only 60 per cent done when it is launched, but Bethlehem doesn't expect to lose any of that seven-month advantage during the finishing process.

Builder of large ships

THEN there is the Newport News Shipbuilding and Drydock Company which was organized in 1890 and has built 66 vessels for the Navy including 13 battleships and this country's largest liner, the 33,000 ton *America*, which is now the transport *West Point*. Now in addition to merchant vessels, battleships and cruisers, the company has specialized in aircraft carriers, a type of craft that requires 5,000 different plans. The carrier presents many problems not found in any other ship. First of all the flight deck, most important part of the ship, is designed first and the ship developed to carry it. Any layman can see that it must be quite an engineering problem to support a flight deck over a hangar that is practically as large as the flight deck itself with no columns or obstruction in the hangar.

In addition to shipbuilding, the company has also built two new submerged ways since March. Built like a dry dock, the submerged way eliminates most of the hazards of launching. When the ship is ready, the gates at the sea end are opened—in comes the ocean and the ship is floated out. A new carrier will

be started in one of the new ways soon.

The Electric Boat Company has been building submarines ever since subs were introduced. Some idea of the complications involved in submarine building may be realized when it is shown that 700 instruments are necessary to operate the mechanism. A new record was established some weeks ago when workers set up the bulkheads for a new boat in five days or the equivalent of two weeks' work in normal times.

Out in Manitowoc, Wis., there is another firm building submarines which kept its men at work during the depression by building cranes, shovels, paper mill machinery and cement mills when the shipbuilding industry was in the doldrums. Their subs will go to Chicago via Lake Michigan, then through the Chicago river partly submerged so they can clear the loop bridges. From there they will be carried on specially built drydocks down the Illinois and Mississippi rivers to New Orleans.

Small boats in large numbers

IN BAYONNE, N. J., there is another interesting development in naval construction where the Elco Division of the Electric Boat Company is building motor torpedo boats that have twice the speed and carry twice the torpedoes of German E boats. On the Ohio River near Pittsburgh the Dravo Corporation is building 165 foot sub-chasers from an assembly line. For the first time since the war of 1812, river yards are being used here and in other localities for the construction of sea-going naval vessels.

Obviously it is impossible to relate the most interesting things that are going on in naval shipyards. But, unless past experience is ignored, some surprises are developing behind their locked doors. American ingenuity has never failed to produce naval surprises in a crisis.

When Joshua Humphries built his first frigate it was ridiculed as too long, too high, too narrow, too many guns and topheavy. A few years later, it had proved it could out sail, outgun and outfight any frigate afloat. That ship, Mr. Citizen, was "Old Ironsides." The Civil War produced the *Monitor* to revolutionize naval construction again. In the World War, although shipbuilders were not responsible, the Americans mined the North Sea and penned up German U-boats after the English had said it couldn't be done.

No one knows what this war will bring. Al Williams has suggested that what we need is a submarine airplane carrier. Don't bet that somebody won't make one or something else that sounds just as impossible. Put an idea in a shipbuilder's head and he is more likely than not to do the impossible.

With his masts shot away, his guns out of action, his ship sinking beneath him, John Paul Jones, when asked to surrender, cried: "We have just begun to fight." He then boarded and took the *Serapis* while his own ship drifted and sank. With their yards set for capacity operation, American shipbuilders too may well cry: "We have just begun to build—look out for the flood!"

A-Shopping I Did Go

(Continued from page 44)

you'd better get another jar of face cream while you're downtown. That's what I did . . . only to be met with more of the present-day facts-of-life. Just let me tell you what I learned at that fragrant and beguiling counter.

Some of the big companies, like Yardley's of London, Coty and Houbigant, have their American places . . . and you will be able to get your favorites. But for perfumes and many toiletries, imported oils are needed . . . and hard to get. So, too, is alcohol which, it is rumored, will be rationed. They tell me that, in the last war, when European supplies were cut off, some of the makers made up new perfumes (right out of the East River, said my cynical informer) and the scent loving ladies had to be content with substitutes.

Fine soaps are higher

HOW'S your soap supply? A kind for which I paid \$1 a box this time last year (you know the kind you keep on hand to put in the guest bath room) I found to be \$1.29 this year. Same soap, same box. Some of the cakes of the well known brands may not look smaller, but the papers are thicker . . . there's more wrapping and less soap. But that's only the beginning. Soap is made of edible tallow. Tallow goes into margarine and oleo. Need I say more?

Certain items are already being discontinued. Dusting and sachet powders, in a famous English line, are no longer to be had.

Packaging is the big cost in toiletries. You may not have to worry about the creams but they may come in less elaborate containers. Lines that carry the \$1 and \$2 sizes may just do away with the \$1 one altogether. Those beautiful Cellophane-wrapped items will soon be nought but memories, because, so I'm told, the Government has already put a date on Cellophane. Metal compacts are fewer, too, and a little higher in price. That's understandable.

So that's where my money has gone, I said to myself, as I marshalled the facts. At least I understood a little more . . . if that was any consolation. The garbage pail, my hair nets, the salmon catch and the shears . . . what a lot I'd learned! And how shall I put that learning to use? Well, I'm not selfishly hoarding anything, but I am thoughtfully looking ahead and making my plans and provisions accordingly. It was an enlightening experience. All along the line I found small and large merchants courageously doing their best, with increased wages to pay, higher transportation costs to meet and more limited supplies from which to draw . . . many of them making less money, but all carrying on in the cheerful American spirit. But . . . who'd have dreamed that the "mis'ry" of Gladys would have taken me so far afield!

**YIPPEE! THAT COWBOY
WILL NEVER
GIVE UP!**



**CAN'T WEAR HIM
OUT-HE'S LIKE
CAST IRON PIPE**

YOU often hear *cast iron pipe* used as a simile for toughness, strength or endurance. Why? Because nearly everybody knows that cast iron pipe will outlast a century. Cast iron underground mains installed more than two centuries ago are still in service. The *known* useful life of cast iron pipe is at least double the *estimated* life of other pipe used for water, gas or sewer mains. Through avoided costly replacements that would be necessary with shorter-lived pipe, cast iron pipe helps keep down local taxes. It can be salvaged or re-used. It is the only ferrous metal pipe, practicable for underground mains which rust does not destroy.



Unretouched photograph of more-than-century-old cast iron pipe still serving and saving taxes in Lancaster, Pa.

Pipe bearing
this mark



is cast
iron pipe

Available in diameters from 1 1/4 to 84 inches.

**CAST
IRON
PIPE**

*No. 1
Tax Saver*

CAST IRON PIPE RESEARCH ASS'N, T. F. WOLFE, RESEARCH ENGINEER, PEOPLES GAS BLDG., CHICAGO

ONE LAW for ALL...

English Labor Code Made to Harmonize with Common Law

SINCE I came over to the United States I have been shown a picture of a group of strikers beating up a workman who had tried to pass their picket line and go to his job. So vividly is this incident depicted by the camera that I could not but reflect on what would be done about such brutality in my country.

In England the gentleman with the initials "U.A.W." on his cap would have been rewarded with two years imprisonment at hard labor under the common law. To go on picket with a weapon of that nature is a most serious offense. His companions engaged in slugging the unfortunate person under the overcoat would have been lucky to get off with as little as 12 months imprisonment.

But actions would not have ended here. The magistrate dealing with this infringement of the common law would have drawn the attention of the Labor Ministry to the complicity of a labor union in an act of violence. Such complicity entails the withdrawal of all privileges enjoyed by the union, including the immunity of its funds to suit or attachment and its right to picket.

Violence such as that so often reported in the American press would all be treated in England as violations of the common law and the offenders punished as such. Trade union legislation does not override common law. The two are in harmony with each other. Any violation of common law by the members of a trade union, unless immediately disavowed and unless steps have been taken to prevent its recurrence, would result in the withdrawal of the union's privileges. The object of the Trade Disputes Act of 1927 was to harmonize trade union law with the common law and to prevent the unions from occupying a position above the law.

A democratic nation should not permit non-democratic institutions to exist within its borders. The administration of a labor union should be government of its members, for its members, by its members. This can be assured by the British methods of secret ballots annually for all union officials and complete accountancy and audit of all funds received.

Samuel B. Pettengill has outlined in



In England this kind of "picketing"—by C.I.O. auto workers during the Ford Motor strike—is just plain crime

America's Future the following concise program for the assertion of the right to work:

1. Democracy in labor. This means that the men will be freed from self-perpetuating oligarchies. It means, too, that election of officers and especially a strike vote shall be by secret ballot and honest count.

2. Preserve the right to picket as a form of free speech, but forbid mass picketing, or the use in the picket line of men who are not bona fide employees of the struck plant. We have forbidden the importation of outside strike breakers. Let us equally forbid the importation of outside strike makers.

3. Forbid political contributions from the treasury of labor unions as we forbid political contributions by corporations.

4. If violence is used to prevent men from working, give them a simple legal remedy, in which all may join in one action, for the loss of their wages against those who denied them the right to work.

5. No negotiations with the leaders of men who are violating the law. Obey the

law first. Then negotiate; otherwise you dignify violence, and give prestige to radicals, preventing solid and responsible labor leadership from developing from the ranks.

6. Provide that no employer shall be required by the National Labor Relations Board to reinstate an employee who has engaged in violence or the seizure of property.

English practice, as measured by Mr. Pettengill's six points, is about as follows:

1. British trade unions are completely democratic, both in election of officers and audit of accounts.

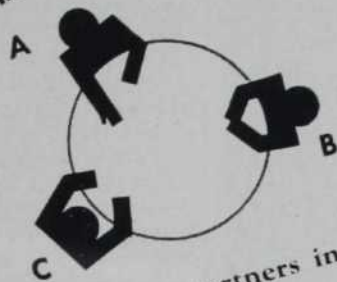
2. The privilege of "peaceful picketing" is conceded, with the accent on "peaceful." Mass picketing is not permitted and the slightest recourse to violence is punished by the normal action of the law.

3. Political contributions are permitted but contribution is optional with the members. The receipt given to a member for a political contribution must be on a separate

(Continued on page 66)

1

No visible hiatus here



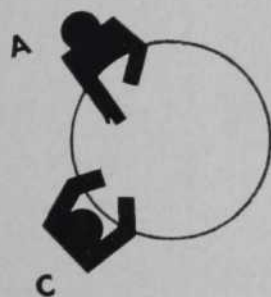
A, B, and C are partners in a successful enterprise.

**Don't let the
HIATUS*
get you**

*A SPACE WHERE SOMETHING
IS WANTING

2

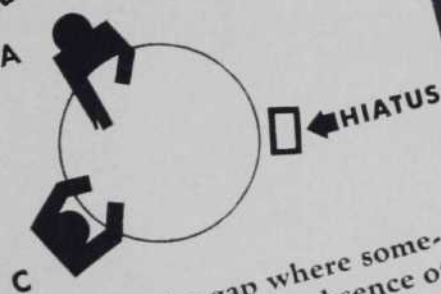
Still no avoidable hiatus



B has died. A and C are ready to form a new partnership and continue the business.

3

Here's that troublesome hiatus



The hiatus—the gap where something is missing—is the absence of a plan and the funds with which A and C can take over B's interests, for those interests didn't die with B.

ANY partnership agreement contains a dangerous hiatus unless it includes provision for the acquisition of each owner's interests by the survivors in the event of his death. And unless that provision includes a means of providing the necessary funds for such acquisition, it, too, contains a hazardous hiatus.

Many partnerships have found Northwestern Mutual Life Insurance an effective means of caring for the inevitable financing required by the death of a

member. With such insurance, as a part of an agreement, the continuity of ownership and management is assured, each partner knows that his estate would receive an agreed-upon amount; and completion of the transaction is assured without impairing the financial position of the surviving owners or of the enterprise.

A Northwestern Mutual agent will be glad to cooperate with you and your attorneys in the protection of your partnership interests.

1942 DIVIDENDS to Northwestern Mutual Policyholders will be maintained at the same scale as was paid during 1941.



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How can a stamp make your mail move faster?

A meter stamp does! . . . it's printed on the envelope by the Postage Meter, the machine that stamps and seals mail faster than any man, gets it out of your office earlier . . . Gets it out of the postoffice faster, too, because metered mail is already postmarked and cancelled . . . needn't wait in the postoffice for facing, cancelling, postmarking . . . can make earlier trains and planes.

The Pitney-Bowes Postage Meter is saving motions and man hours these days in thousands of offices—and thousands of post-offices . . . increasing the effi-

ciency of both government and business!

The Postage Meter usually saves postage; is worth several times its cost in convenience alone . . . never runs out of stamp denominations, eliminates all unsanitary licking and sticking; seals envelopes at the same time it prints postage; does its own accounting; and protects postage from waste, loss and theft. It's invaluable today in thousands of offices, large and small.

Ask our nearest branch for a demonstration—now! Or write Stamford direct.

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Branches in principal cities. See telephone directory. In Canada: Canadian Postage Meters & Machines Co., Ltd.

1338 Pacific St., Stamford, Conn

Move Over, Managers!

(Continued from page 38)

own shop. But the new technology and the coming of large-scale enterprise introduced an enormous complexity into that simple relationship.

To cope with this complexity there gradually came to the fore a new element—the professional managers. We had three groups: those who were or might become users of goods and services, those who had skills and willing hands to produce and serve, and those who had savings they wished to hire out—that is, money to risk in buying the tools with which the workers could be employed.

Jobs became specialized

FOR small enterprises operating locally one or two men provided the capital and directed the business. But, with large organizations whose activities were spread out over extensive regions or the whole country, it became essential to obtain the capital from large numbers of investors living in remote localities. Distribution had to be arranged through various channels in order that the product should reach efficiently those who were to use it. Thus business grew very complex and specialized. Somebody had to specialize in bringing the three elements together. Professional management was born.

Successful managers must demonstrate their possession of special faculties, uncommon judgment and rare abilities, often amounting to genius. Sometimes it is a miner who has this endowment and he becomes president of a great steel company. Or it may be an office boy who 30 years later heads one of the big packing companies. They were men who had high talent for policy making in pricing, distribution, design, public relations and the raising of needed capital. Workers can make that leap but they do it only as individuals, never in a collective capacity.

Now if it has been shown that management is a distinct and indispensable function, it only remains to decide who is to perform it—those now in charge or who will be placed in charge through the process of natural selection, or the leaders of organized labor. The whole issue now raised by the C.I.O. proposals for automobile factory operation narrows down to this one point.

When the spokesmen for less than ten per cent of American workers demand that the Government help them as a war measure to usurp management's place in the great mass production industries, are they not thinking of the rewards and the power rather than the responsibility? Mr. Murray and his aides want to take control of industries that have been financed and organized to a high degree of efficiency. The pioneering has been done. They are not interested in founding a business that they can experiment in managing. They know in

fact that such experiments in this country have always failed. No industry council or shop committee wants to share losses; only profit sharing interests them.

Several years ago the head of a great store in a conversation with an editor described in terms of high enthusiasm an advisory Congress of Employees he had fostered in his organization. He thought it a wonderful thing, an innovation that all employers should embrace. But when the editor inquired a year or so later how the plan was progressing the merchant admitted sadly that he had discontinued it.

"We couldn't interest our employees in anything much beyond wages and hours," he said. "They could not be brought to consider seriously our other real problems of management. They even objected to holding the conferences half on our time and half on theirs but wanted them all on our time."

In the present relentless struggle, with the nation straining every sinew to produce at its utmost capacity, the question of who shall be our managers hinges first of all on which can produce most rapidly and efficiently. Shall we tear down the industrial structure and try to rebuild it under the enemy's fire, or shall we start shooting with the system that we have? It seems ironic now of all times to consider turning over the controls to leaders whose organizations are committed to restrictions on hours and unit production per man.

Good management aids consumers

WE have left, then, only the question of which type of management will best serve the general interest in peace time. On this score it is realistic to consider that the strongest human motive is the service of selfish interests. Experience has shown that private management's own interests are best served by maximum production (subject only to the limits of what the market will absorb), by high wages, by low prices, by equality of individual opportunity, by rapid turnover and by a good return on invested capital. All of these are compatible with the best interests of the other elements involved in economic life—consumers, labor and the owners of capital.

Labor leaders, on the other hand, are, in the very nature of things, serving the interests of a special group which does not even include the great majority of workers. Their principal selfish interests are high wages, shorter hours (which means restricted production, higher prices and reduced consumption), equality of reward for unequal services, and little or no regard for the wages of savings, or capital. Only one of these, the first, can be made compatible with the interests of all groups.

The case for the Murrays and the Reuthers in the "managerial revolution" is a serious threat only because of the stress and emotion of war, which unfortunately weaken men's resistance to unsound innovations offered in the name of a beloved cause. But it will have to be answered, even as the guns roar, and the people's representatives must make the answer.

BOMBERS DON'T Tip-Toe

Signals flash from observation outposts . . . mechanical ears pick up the sound of humming motors. Long before ears or eyes detect the enemy, the city is ready.

Bombers don't tip-toe. But business failures can, and often do, creep up without warning. In these days of unusual credit conditions . . . of priorities, of labor and material shortages . . . large "safe" customers can fail suddenly, imposing a serious loss on creditors.

A keen credit department is your first line of defense. But it deserves reinforcement against failures which cannot be foreseen . . . protection against losses which cannot be prevented.

AMERICAN CREDIT INSURANCE
is the strategic defense employed by thousands of manufacturers and wholesalers to protect working capital and profits against credit losses. It guarantees payment of Accounts Receivable . . . guarantees reimbursement for losses caused by the insolvency of customers. Write for your copy of our free booklet "Why Business Failures?" Address Dept. N-1.

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First National Bank Bldg.,
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49 YEARS IN BUSINESS



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Own a share in America . . . buy DEFENSE SAVINGS BONDS

Where Spending Can Be Cut

PRELIMINARY report of the joint congressional committee on non-defense expenditures recommends savings aggregating \$1,301,075,000 by abolishing several administrative agencies, skeletonizing the Works Projects Administration, and drastically reducing farm benefits and funds for public building, river, harbor and highway construction. As a further and immediate "contribution to the financing of the war program," the committee urged legislative action to cover into the Treasury \$415,890,061 in current non-defense appropriations which the Budget Bureau has impounded.

Hope that later investigations would lead to recommendations promoting additional savings was voiced by Senator Byrd, Democrat, of Virginia, committee chairman. Possible economies in non-essential spending, including cuts advocated in committee's report, would approximate \$2,000,000,000.

Along with evidence of its budgetary surgery, the committee warned against new adventures in spending under the guise of war necessity. The futility of retrenching in existing non-essential spending and subsequently appropriating for programs and projects that could be deferred until after the emergency is obvious, the report asserted.

Key thought in committee's deliberations:

Before the war, economy in non-essential spending was important. Now it is vital. There is no room for non-essentials in a government stripped for action. Our united purpose is to produce sufficient armament and trained personnel to win this war. Nothing can be permitted to interfere with this objective. The American people are being asked to pay extremely burdensome taxes which will become greater; they are being asked to make great sacrifice and endure hardships. The Government should set the example.

The United States Treasury is facing the tremendous task of financing the war. We must decrease its difficulties, not increase them. All non-essential spending must yield to the needs of our defense program.

Specific saving recommendations and estimated savings were:

Civilian Conservation Corps (abolition), \$246,960,000; National Youth Administration (abolition non-defense), \$91,767,000; Works Projects Administration (curtailed activity), \$400,000,000; agriculture (abolition of Farm Security Administration, deferment of land purchases and other curtailments), \$230,622,000, public works and federal highways (one-half deferment in public roads), \$64,000,000, other public works (deferment of non-defense public building, Department of Interior items and rivers and harbors and flood control items), \$97,-

726,000; cancellation of loan activities by government corporations, \$170,000,000.

Not all members of the committee were in agreement with the recommendations. Treasury Secretary Morgenthau, a member by virtue of the creating statute, noted reservations in respect to the specific recommendations on agricultural appropriations although recommending a greater reduction. Wrote Mr. Morgenthau:

Although government aid was necessary to bring the farmer's net income from \$3,125,000,000 in 1932 to \$8,500,000,000 or more in 1941, certainly after having reached this goal there does not appear to be any reason to continue spending at the same rate. The farmer is getting his share of the total expenditures made by the Government, as the increase in his net income indicates. . . .

In view of these circumstances, I feel at this time that we should make drastic cuts in our agricultural expenditures and I would recommend that the Secretary of Agriculture be required to operate the agricultural program with an annual appropriation of \$500,000,000 less than authorized for the current fiscal year.

Also, he objected to release of unused appropriations impounded by the Budget Bureau, said funds in question were needed for "unforeseen contingencies."

Membership of the committee includes:

Harry F. Byrd, Chairman
(Member, Senate Finance Committee)
Robert L. Doughton, Vice Chairman
(Chairman, House Committee on Ways and Means)
Henry Morgenthau, Jr.
(Secretary of the Treasury)
Carter Glass
(Chairman, Senate Committee on Appropriations)
Walter F. George
(Chairman, Senate Committee on Finance)
Kenneth McKellar
(Democratic ranking member, Senate Appropriations Committee)
Clifton A. Woodrum
(Democratic ranking member, House Appropriations Committee)
Thomas H. Cullen
(Democratic ranking member, House Ways and Means Committee)
Allen H. Treadway
(Republican ranking member, House Ways and Means Committee)
John H. Taber
(Republican ranking member, House Committee on Appropriations)
Gerald P. Nye
(Republican ranking member, Senate Committee on Appropriations)
Robert M. LaFollette, Jr.
(Progressive, Senate Committee on Finance)
Clarence Cannon
(Chairman, House Committee on Appropriations)
Harold D. Smith
(Director, Bureau of the Budget)

Almost coincidental with the release of the congressional committee's report was the publication of similar conclusions established through an independent study by the Brookings Institution. It is possible, the Institution said, to reduce federal expenditures for non-defense purposes by more than \$2,000,000,000. Suggested reductions by major classes of expenditures are itemized in millions of dollars:

Flood control, rivers and harbors, and other water projects	350
Agriculture	625
Public domain	19
Public welfare	615
Highway development	171
Executive and other general activities	5
Transfer of costs to state and local governments	300
Total	2,085

One Law for All

(Continued from page 62)

rate slip from that for his dues and the accounting of political funds of a union must be distinct, both in collection and disbursements.

4. Violence to prevent men from working is punished under criminal law, the same as any other violence. It also entails withdrawal of privileges from the union concerned.

5. There is no refusal to negotiate with leaders who are violating the law in England. But as the unions would have lost all their privileges, their leaders would be negotiating at a great disadvantage.

6. There is no necessity for this provision in England because an employee who has engaged in labor violence or in the seizure of property would be in prison and not available for reinstatement in his job.

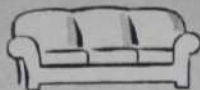
A sidelight on reinstatement is provided by an "unauthorized" bus strike that occurred in London a few years ago. It was not sanctioned by the Transport Workers Union which organizes the workers in that industry, but was a local strike organized by a few leaders in London against instructions of the union head authority. When the strike collapsed after three weeks, the employers stated their willingness to reinstate all the strikers in the positions they had held.

At this point the Transport Workers Union intervened. It pointed out to the employers that the six strike leaders had been suspended from the union for indiscipline in leading an unauthorized strike and were no longer considered members of the union. The strike leaders were not reinstated because the union insisted on maintaining discipline in its ranks.

SIR CHARLES MORGAN-WEBB



Used in respirators to filter air, protect workers' health.



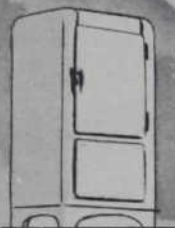
Furniture manufacturers use KIMPAK for padding.



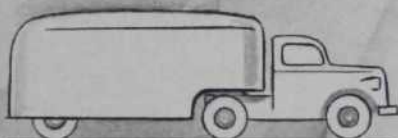
Insulates against noise, heat and cold in cabins and fire-walls of airplanes.

The Thousand and One Uses for Amazing Kimpak

Filters out foreign matter in making of rayon.



Insulates refrigerators against heat infiltration.



Motor truck bodies, too, are insulated with KIMPAK.



Used by beauty shops in permanent waving.

Kimpak

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One of the *busiest* materials in America!

IN numerous fields of industry, KIMPAK® is helping to make some products better. KIMPAK is a material of seemingly unlimited uses!

What is KIMPAK? It's a pure wood fiber product which is adaptable to a wide variety of needs. One type is porous, highly absorbent, has a low flow resistance... filters air, gases, liquids. Another form of KIMPAK is highly effective thermal and acoustical insulation... flexible, easily installed. It's insulation that won't sag, sift or settle... vibration can't harm it.

KIMPAK gives resilient bulk at low cost, an attribute that makes it useful for padding upholstered furniture, leather goods, candy and cosmetic boxes, and many other products.

KIMPAK comes the way you need it, thick, thin, and in any dimensions you require. KIMPAK is made moisture-resistant or moisture-absorbent... abrasion-resistant... even fire-resistant!

Most important now, KIMPAK is *immediately available*.

Want to know more about KIMPAK and what it may do for you? Send for free book "KIMPAK—AND ITS THOUSAND-AND-ONE USES IN INDUSTRY."

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Attention of



Stepping Stones to Affluence

By CARLISLE BARGERON

THE BILL printed below is simple and understandable, yet Congress apparently has trouble voting for it. One reason for this reluctance is explained in this article

77th CONGRESS
1st Session

S. 1987

IN THE SENATE OF THE UNITED STATES

October 20 (legislative day, October 16), 1941
Mr. Hatch introduced the following bill; which was read twice and referred to the Committee on the Judiciary

A BILL

To amend section 190 of the Revised Statutes so as to further restrict officers and employees of the United States heretofore or hereafter separated from the service from acting as counsel or agents in matters affecting the United States.

- 1 Be it enacted by the Senate
- 2 and House of Representatives of the United States of America
- 3 That section 190 of the Revised Statutes
- 4 (5, sec. 99) is amended to read as follows:
- 5 "SEC. 190. (a) It shall be unlawful for any person who has been an officer or employee of an agency of the United States to receive or agree to receive, directly or indirectly, any compensation for services rendered in connection with prosecuting, negotiating, or otherwise handling before or with any court or agency of the United States, within two
- 6 years after the termination of his service as such officer or employee, any claim, contract, or other matter in which the United States is an interested party.
- 7 (b) As used in this section, the term "agency of the United States" means any department, independent establishment, or agency in the executive branch of the Government, and includes any Government-owned corporation.
- 8 (c) Any person who violates the provisions of this section shall, upon conviction thereof, be fined not more than \$10,000, or imprisoned not more than two years, or both.
- 9

A BILL

TO AMEND section 190 of the Revised Statutes so as to further restrict officers and employees of the United States heretofore or hereafter separated from the service from acting as counsel or agents in matters affecting the United States.

BE IT ENACTED by the Senate and House of Representatives of the United States of America in Congress assembled, that section 190 of the Revised Statutes (U.S.C., title 5, sec. 99) is amended to read as follows:

Sec. 190 (a) It shall be unlawful for any person who has been an officer or employee of an agency of the United States to receive or agree to receive, directly or indirectly, any compensation for services rendered in connection with prosecuting, negotiating, or otherwise handling before or with any court or agency of the United States, within two

years after the termination of his service as such officer or employee, any claim, contract, or other matter in which the United States is an interested party.

(b) As used in this section, the term "agency of the United States" means any department, independent establishment, or agency in the executive branch of the Government, and includes any Government-owned corporation.

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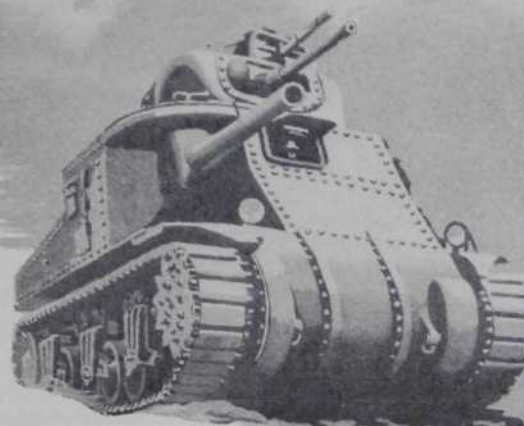
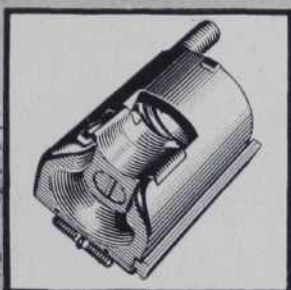
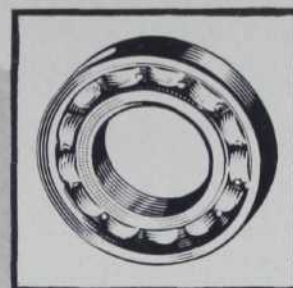
THOMAS G. Corcoran (Tommy the Cork) had business last December which took him down the halls of the Senate Office Building. He was there to tell the Truman Investigating Committee about his reputed activities and earnings as a lawyer for defense contract seekers. Mr. Corcoran might well have appeared a little earlier to visit with Senator Hatch of New Mexico whose office is in the same building. They could have talked about a simple, 20-line bill which the Senator introduced last October. Had it been passed quickly, Tommy the Cork might not have had to be in Washington in December—nor would he have much reason to come for another year or more.

The new Hatch Bill—S. 1987—has for its purpose "to further restrict officers and employees of the United States heretofore or hereafter separated from the service from acting as counsel or agent in matters affecting the United States."

The bill has been lying in the basket of the Senate Committee on the Judi-

ciary since October. It is perhaps the shortest and simplest bill introduced into the 77th Congress. For certain politico-lawyers it carries more dynamite than they may ever see in a bombing raid.

Its purpose is to protect from within the strength and security of the American Government at the same time we



Parts into Power

The Role of Sub-contracting in Arms Production

As the nation's war production rises, it becomes increasingly plain that high water level is far above the present tide. Each new objective is barely set before it must be replaced by still greater goals. Each raising of the mark places new obligations upon American industry to meet the driving demands of victory.

In this greatest of "changeover" periods the effect on those manufacturers who were relatively untouched by the United States arms program a year ago now becomes apparent.

In order to be in a position to make parts or perform special operations for prime contractors, many companies must adapt their methods, their plants and their personnel to the requirements of the hour.

Bank credit is often helpful in expediting this transition. Directly and through its correspondent banks throughout the nation, the Chase National Bank offers its cooperation both to prime contractors and to all other sound enterprises, large or small, which are capably undertaking indirect defense work.

THE CHASE NATIONAL BANK

OF THE CITY OF NEW YORK

Member Federal Deposit Insurance Corporation

WHAT EMPLOYERS SHOULD KNOW ABOUT LOAN COSTS

DO YOU KNOW how much it actually costs your employees to borrow from a family finance company? Many executives believe the charges to be far higher than they actually are.

Suppose one of your men suddenly needs \$50 to meet an emergency. He tells Household Finance about his problem and gets the money in a quick, private transaction. No endorsers or guarantors are required.

\$50 loan costs \$4.48

The borrower chooses, from a variety of payment plans, the one which best fits his own income and situation. He may, for instance, choose to repay his \$50 loan in six monthly instalments of \$9.08 each—a total of \$54.48. In that case, the total cost of his \$50 loan is only \$4.48. This charge includes everything. There is nothing more to pay. A \$100 loan, repaid in six monthly instalments of \$18.15 each, a total of \$108.90, costs just \$8.90.

How cost may be reduced

When an employee borrows at Household Finance, he pays charges only on his monthly balance, not on the original amount of the loan. The sooner a loan is repaid, the less it costs. If a borrower should receive a bonus and wish to repay part or all of his loan ahead of schedule, he may do so at any time. The charges are reduced in exact proportion to the extent of the prepayment.

The table below shows some typical loan plans. Payments include all charges. Charges are made at the rate of 2½% per month (less in many territories on larger loans). Household's charges are below the maximum rates authorized by the Small Loan Laws of most states.

Last year Household Finance made over 800,000 loans to workers in all branches of industry. These loans helped troubled families to pay medical expenses, keep insurance in force, clean up old debts and maintain living standards.

We would like to send you more information about Household Finance service without obligation. Please use the coupon.

WHAT BORROWER GETS

	WHAT BORROWER REPAYS MONTHLY				
	2 paymts	6 paymts	12 paymts	15 paymts	18 paymts
\$ 20	\$ 10.38	\$ 3.63	\$ 1.95		
50	25.94	9.08	4.87		
100	51.88	18.15	9.75	\$ 8.08	\$ 6.97
150	77.82	27.23	14.62	12.11	10.45
200	103.77	36.31	19.50	16.15	13.93
250	129.71	45.39	24.37	20.19	17.42
300	155.65	54.46	29.25	24.23	20.90

Above payments include charges of 2½% per month and based on prompt payment are in effect in seven states. Due to local conditions, rates elsewhere vary slightly.

HOUSEHOLD FINANCE

Corporation
ESTABLISHED 1878

Headquarters: 919 N. Michigan Ave., Chicago

One of America's leading family finance organizations, with 305 branches in 203 cities

HOUSEHOLD FINANCE CORPORATION, Dept. NB-B
919 N. Michigan Ave., Chicago, Ill.

Please tell me more about your loan service for wage earners—without obligation.

Name.....

Address.....

City.....State.....

are proposing to spend \$150,000,000,000 to protect it against enemies outside our borders.

Its sponsor, Senator Hatch, is an experienced legislator. He tilts at no windmills. He proposes legislative cures for definite ills.

Three years ago, aroused by the danger of perversion of our electoral machinery, he proposed and drove through an Act to prevent government employees from contributing to political campaigns. He was roused to do it because of definite proof that party overlords all over the country were building up a system of coercive contributions which, if successful, would make it impossible to hold decent, honest, national and local elections.

Senator Hatch has specialized in the prevention of political pollution. To him the stream of representative government must run strong and clear. He knows the temptations of men in public offices to stay in those offices so long as it suits them, and, more important, to use afterwards in private life the prestige gained in office to advance themselves as lawyers or public relations experts for folks back home.

What is S. 1987 shooting at? The story can best be told by describing an example. Our example, then, is Mr. Thomas Corcoran, an able, resourceful member of the New York bar, long-time Brain Trustee, a man who had his fingers in practically every piece of important legislation passed between 1933 and 1938.

"Influence" for sale

THIS story, then, deals with Washington politico-lawyers, part of whose stock in trade is political influence or contact developed while in public office. They have always done quite well, thank you. At a time when the Government plans to spend \$150,000,000,000, the chances are that they will do even better.

Only one cloud mars the sunny sky—the shadow of Senator Hatch and his S. 1987. He is the more dangerous to ambitious, erstwhile office holders and government employees because he has already one such bill to his credit on the statute books.

Somewhat like people who lean over the fence to watch a steam shovel excavating, 20 or more politico-lawyers sat in the Truman Investigating Committee room on that December day, alternately dropping and closing their jaws. What was happening before them brought mingled envy and admiration.

The fabulous Mr. Corcoran was blandly telling the assembled senators that he had made at least \$100,000 in recent months. This did not include his total earnings, he said, and even in this restricted category he was still to be given some stock in a corporation which, under his guidance, had grown from a \$3,000,000 concern to one getting a Reconstruction Finance Corporation loan of \$29,500,000.

Corcoran's appearance before the committee had been hailed in the newspapers for several weeks. Formerly one of the President's closest "Brain Trusters" his operations as a politico-lawyer

had long been bruited about Washington. Rumor has it that his operations had caused a strain with his former patron, Supreme Court Justice Felix Frankfurter, and many other more idealistic New Dealers. Under the circumstances, his appearance before the committee was expected to be a major news event even in the crowded war times. In a way it was.

The metropolitan newspapers with scarcely an exception remarked upon the courtesy and gentleness with which he was treated. He was escorted to the meeting by an official of the Senate; the committee graciously gave him one of its attorneys to assist him with his papers.

"Burdens of government"

BUT what almost took the breath of the lawyers who saw the show was Corcoran's explanation that, in giving his clients his "knowledge of the Government"—what the Government wanted and did not want—he considered he was "lightening the burdens of government" and, therefore, rendering a service. Two of the lawyers present had been "spanked" by congressional committees in the past; two, in fact, were to be "spanked" or more roughly treated, the very next day. Several of them were finding the going rather hard because of competition in their business.

Here before them was success in their trade. Their eyes almost popped out as they saw the senators bow in agreement with Corcoran's engaging explanation. He had far more cases offered than he could accept, he said; so many sought him out that he had to have an unlisted telephone. He simply could not afford to take a case for less than \$5,000.

Corcoran's success defies the imagination. He was not a political figure when the New Deal came in. Instead he was a \$4,000 a year law clerk in the Reconstruction Finance Corporation. The unchallenged story, repeated many times over recent years, is that he lost heavily in the collapsed stock market and brooded over it. Eugene Meyer, head of the R.F.C. for a short time in the latter Hoover days, asked a New York law firm for a bright young man. Corcoran was recommended and responded.

The New Deal brought in hordes of bright young men, professors, economists, intellectuals. Among them Corcoran found many friends, young men with whom he had gone to Brown, later to Harvard Law School. He, himself, was only 33. What was more important to him, he was one of the young men who had studied under Felix Frankfurter at Harvard and had kept up a correspondence with him. Frankfurter looked upon him as "one of his boys."

Corcoran moved out from the cloisters of the R.F.C. With the new arrivals it was like being on the campus again. His buoyancy of spirit returned. His engaging personality and brilliancy made him a popular figure in the bachelor quarters that were being established all over town, quarters that were likened to fraternity houses. He would play the banjo and sing Irish ballads.

Democracy ran rampant. A story—

which Secretary Ickes has said he doesn't recall—is to the effect that, after one of these parties, out in Virginia, some distance from Washington, Mr. Ickes was wondering how he could get into town. Corcoran bobbed up with a car, rode home with him, was solicitous, kept up a rapid-fire of interesting stories.

Afterward, the Secretary is supposed to have asked a third person in the car:

"Who was that engaging young man who saw us home."

Whether the story is true or not, Mr. Ickes and Corcoran have long been good friends. In the many cliques and schools that were to develop, Corcoran was in the Ickes school.

In due time, Corcoran met the young Roosevelts—Jimmy, Elliott and Anna. They got to taking him to the White House for the intimate scrambled egg Sunday night suppers. There Tommy played and sang.

Teamed with Cohen

IN THIS way, he advanced to be one of the most controversial figures of the hurly burly New Deal. The influence he has exercised cannot be minimized. Mr. Roosevelt liked him, began to call on him to help draft speeches. Corcoran tied up with Benjamin Cohen, a more studious and retiring fellow, and the two of them were selected to draft the Utility Holding Company Act of 1935. They also drafted the two securities acts. They became a celebrated team.

Corcoran had a native bent for political maneuvering. Cohen did the legal work, Corcoran the politics. He would call up members of Congress and say "This is Corcoran calling from the White House." The inference was plain that he was acting on behalf of the President. Members of Congress complained but the President never repudiated him. Indeed, he laughed heartily at a Gridiron dinner skit which depicted Corcoran with six telephones calling in all directions with "This is Corcoran calling from the White House."

It is doubtful if there could be such a Corcoran story had not a distinct new type of Washington journalism arisen with the New Deal, the so-called news gossip columns. Editors throughout the country, heretofore giving relatively little space to Washington news, now faced the rapid centralization of government and the demand for Washington information. Many of them grabbed the columns as a condensed answer to their problem. Corcoran, with his entree to the White House, his knowledge of what was going on in New Deal circles generally, took the columnists pretty much under his wing. He had such an uncanny ability to space real feed-box information with his own propaganda that at least some of the syndicated columns became almost his vehicles.

In these columns he would launch booms for particular men to particular offices and campaigns against those whom he opposed. There is no doubt that, in this way, he influenced any number of high appointments—federal judgeships, even appointments to the Supreme Court.

He was the prime mover behind Mr.

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Roosevelt's purge campaign of 1938. More than any other one man he was responsible for the break between the President and Vice President Garner.

Eventually people in Washington, of high and low degree, were taking care not to incur Corcoran's enmity. Working with Frankfurter, he is supposed to have placed some 2,000 young lawyers in the Government.

On one occasion, at a dinner, Robert H. Jackson, then Solicitor General, now on the Supreme Court, lifted his glass to propose a toast to "Tommy Corcoran, the maker of Supreme Court justices."

Although being facetious, he was uttering more than a grain of truth. Corcoran had, at the time, unquestionably become the leader of one large, and most of the time, predominant school of New Dealers. Harry Hopkins soured on him. Henry Wallace, then Secretary of Agriculture, kept him away from his door. But, in pretty much the rest of the deck, Tommy was deuces wild.

He was having the time of his life. Although salary had ceased to be a matter of concern with him, he had been promoted to \$9,000 a year, on R.F.C. pay roll though many of his activities fell far outside that agency.

After the Chicago convention of 1940 at which Mr. Roosevelt was nominated for a third term, one thing became clear to Corcoran: Those charged with running the campaign—specifically, Ed Flynn, succeeding to the chairmanship of the Democratic National Committee in place of Jim Farley—were determined that he should have no part of the

campaign. As the campaign progressed, Corcoran, determined to get in on it, resigned from the R.F.C. because of the Hatch Act. He went to New York and set up an independent voters' movement for Roosevelt. The organization brought in a lot of wealthy young men who gave money freely. Flynn realized that this organization was operating in opposition to his regular organization setup, and the two maintained a studied lack of cordiality. Senator George W. Norris of Nebraska served as the figurehead of Corcoran's organization.

With Mr. Roosevelt reelected, Corcoran returned to Washington and announced to his friends that, of course, he did not intend to go back to the \$9,000 a year job with Jesse Jones, but expected a position commensurate with the dignity he had attained. Assistant Secretary of the Navy was the place he sought. It was his idea in those days and the idea of the New Dealers generally that the Republicans or conservatives whom Mr. Roosevelt had brought into the defense setup were to be blanketed by New Dealers now that the campaign was over. In the Corcoran influenced columns the campaign for the assistant secretary job got underway. Knox became perturbed about it and went to the President. He recalled promises that he was to be permitted to name his subordinates. Mr. Roosevelt renewed these assurances. Subsequent events lead to the conclusion that, while waiting for the right job, Corcoran intended to build up a nest egg.

To his friends, Corcoran was fired by

a love for good government. It was his ambition, he frequently said, to set up something akin to the British civil service whereby men could serve their Government fearlessly and honestly without having to worry about eating and sleeping. He wanted, he said, to remove the tentacles of economic doubt from around them.

Stories of Corcoran's operations, circulating around Washington, caused much comment. Exaggerated reports of the money he was making were spread.

A Failure in Oil

IN THE early spring, a man who had sunk considerable money in an Alaskan oil project without striking oil came to Corcoran. He wanted the R.F.C. to finance his further drilling. Corcoran went to see his friend Secretary Ickes under whose jurisdiction Alaska comes. It was agreed that the only way to get the financing from R.F.C. was for the Navy to certify the project as necessary to national defense. Mr. Ickes invited Secretary Knox to lunch with him in his ornate private dining room in the Interior Department building. The Naval Secretary impressed Ickes as being cold to the project. As a matter of fact, Secretary Knox was still concerned about the continued agitation for Corcoran as his assistant secretary. He asked that the proposition be made in writing. The result was a very formal letter which stressed that the responsibility rested solely with Secretary Knox. Mr. Ickes even had his office telephone Knox to emphasize his disinterest.

A few weeks later, Mr. Ickes, appearing before the House appropriations committee, was amazed and indignant to learn that the Republican members knew all about this episode, which had had no publicity. They pressed him so pointedly that the Democratic members voted to expunge the proceedings from the record on the ground that it was an attempt to smear a Cabinet officer. Mr. Ickes has since held Secretary Knox's office responsible for the Republican committee members' conduct and, as a result, relations between the two men are very cool.

As the passing months brought increasing and undoubtedly exaggerated reports of Corcoran's earnings to gossip Washington, one high New Deal influence after another turned against him. Several weeks ago, the position of Solicitor General of the United States, much coveted by lawyers, was vacant. Corcoran and his friends campaigned for it. At least two justices of the Supreme Court—Douglas and Jackson—went to bat for him, but his former mentor, Frankfurter, opposed. A widely circulated story at the time was that a majority of the Court had interceded for him. It is difficult to determine who they were. Secretary Ickes supported him.

At the height of the controversy, Senator Van Nuys, of Indiana, chairman of the Senate Judiciary Committee which would have had to pass on his nomination, said publicly that under no circumstances, would he vote to confirm Corcoran. He added his conviction that

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this was the unanimous attitude of the rest of the committee.

A little earlier, David E. Lilienthal, one of the leading New Dealers, and chairman of the Tennessee Valley Authority writing in a magazine distributed by this government agency, severely criticized men who jeopardized the idealism of the New Deal by turning their experience in the Government to commercial profit. Corcoran took this criticism as leveled at him. He and Lilienthal had formerly been hearty coworkers.

But the President seemingly has not turned against him. Only a few weeks ago he asked Vice President Wallace to give Corcoran a place of distinction in S.P.A.B., the overall agency of the country's war-time production setup. But Wallace demurred on the grounds that Corcoran was too much associated with politics.

The success of this amazing man can be better appreciated, perhaps, when it is contrasted with the experience of Charles O. West, former congressman from Ohio, former Under Secretary of the Interior, and Mr. Roosevelt's liaison man with Congress. The Administration picked West, a highly regarded congressman, to run against the vote-getting Vic Donahey for the Senate in 1934. When he was defeated it became a political duty for the Administration to take care of him. Soon he was appointed Under Secretary of the Interior. Washington observers regarded this as merely a pay roll spot. His real job, they surmised, was to be Mr. Roosevelt's contact man in Congress. That he worked at, at least, in the brief period before Secretary Ickes dismissed him.

The same Senate committee which heard Corcoran heard West the next day. It pressed West for details of his suit against a concern called the Empire Ordnance Company. In West's complaint filed in New York he said this company had grown from a paper organization to one operating six defense production plants and a shipbuilding company, that it had received \$70,000,000 worth of defense contracts and that, by agreement, he was to get one per cent. He sued for \$700,000 less \$13,000 which he said he had been paid.

West spent a miserable day before the committee.

Lawyers, by and large, have a way of quoting the brilliant nuggets of wisdom uttered by the late Justice Oliver Wendell Holmes. But the Washington politico-lawyers are, for the present, at least repeating the statement of Corcoran before the committee that his activities "lightened the burden of government."

So much for the example. . . .

What would Senator Hatch do about it? The answer is in the Bill itself—easy to read, easy to understand but apparently hard to vote for. Otherwise S. 1987 would by now be that law of the land.

The voter, the taxpayer, might want to enjoy the pleasure of thinking himself a member of Congress for a moment.

All right, suppose you vote on something simple first; nothing so hard as an Appropriation Act, or Agricultural Relief or a Transportation Act.

Just try yourself out on S. 1987 as reproduced at the beginning of this article.

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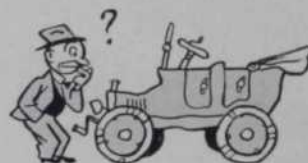
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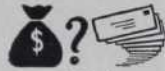


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2 Is your beneficiary provision up to date? Have you unknowingly disinherited possible future children? Should you appoint a new beneficiary or name a "contingent" (secondary) beneficiary? Your agent will gladly make the necessary arrangements.



3 Does Social Security affect your life insurance planning? Perhaps you'd like your agent to show how to estimate the benefits you and your family can expect to receive under the present Social Security Act; how these benefits can be tied in more effectively with your life insurance.



4 Has a financial setback necessitated a change in your life insurance program? Your agent may be able to help you. Possibly a different method of paying premiums, a policy loan, or a change to lower-premium insurance is the best solution.



5 Have you a clear picture what your insurance will provide for your wife, in terms of *monthly income* for various periods?



6 Do you know what kind of policy is best suited to your needs and means? Your agent can explain the

types of life insurance policies available, and help you choose the one best fitted to your particular circumstances.



7 Have your circum-stances changed since you took out your last policy or reviewed your program? A new home, a new child, a new job, or children now earning—any such change may affect a man's insurance program—as your agent can tell you.



8 What are your plans for retirement? Do you know what values your policies will give you at retirement age? Here, too, perhaps your agent can serve.



9 Are the life insurance holdings in your family properly distributed among family members? Is a larger proportion on the wage-earner's life desirable?



10 Have you a "lapsed" policy that might be put back in force? Your agent can tell you if it *can* be reinstated, and if it's to your advantage to do so.



11 Do you have proper knowledge of the benefits and provisions in your present policies? Do you know what options you have? What they mean to you? Have you ever given your agent a good opportunity to review your policy provisions with you?

If you feel that your life insurance agent can be of help to you in any of these 11 ways, why not ask him to visit you? He knows the better he serves you, the better you will appreciate your life insurance.

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How You Will Pay for the War

(Continued from page 32)

that, the Secretary soft-pedaled the idea. But he may pop out with it again. You never can be certain until the new tax bill has become law.

Then, there's another, closer home. It may be that you aren't interested in placing a limitation on profits, that you approach the sorrowful plight of the Treasury in a realistic and selfish manner.

"What's it going to cost me and I don't give a whoop what it costs the other fellow," might be your attitude.

All right, you can be fairly certain that pay roll taxes under the social security law will be hiked. That is how Mr. Roosevelt proposed to raise an additional \$2,000,000,000. You now pay one per cent on your salary up to \$3,000 for old age insurance and your employer is required to match the amount. Next year you may be called upon to pay two per cent and your employer as well. The President expects this increased fund, now \$4,500,000,000, to serve as a cushion against postwar unemployment. Actually, when you pay the money into the Treasury, the Treasury pays it right out again for current expenses, simply placing its own I.O.U. in the money drawer to show where the money went. So that can go for tanks, and guns, and planes, too.

New and higher taxes

SO FAR Mr. and Mrs. Public have been warned that they might be forced to pay a federal sales tax and an increase in social security taxes. But that's just the beginning. According to other talk on Capitol Hill, it's a ten to one bet that increased income taxes, corporation taxes, and special excise taxes on a large number of given commodities will be slapped on your pocketbook before you have recovered completely from the shock of a \$56,000,000,000 budget for guns and airplanes.

Those in the lower income brackets are to find their income taxes deducted by their employer from their pay check each week or month.

This idea also was advanced by Mr. Morgenthau. It is referred to as the "withholding" plan. It would work something like this:

Each pay-day your employer would withhold up to 15 per cent of your check for federal taxes and send the money immediately to the Treasury. Once you had paid all that is required of a person of your income group you would again receive the full amount of your salary or wages.

The withholding scheme would be in place of the regular income tax now due each March on the previous year's income.

When the No. 1 boss of the Treasury proposed his novel withholding tax plan to the ways and means committee last fall it fell on deaf ears, despite his plea that it not only would produce urgently

needed revenue but would place a curb on inflation by "mopping up" excess consumer purchasing power at the source. The lawmakers who heard the Secretary propound his tax theories objected on the grounds that such a scheme would impose an additional burden on persons of small income and that it would have the effect of requiring payment in one year (1942) of taxes on the income of two years (1941 and 1942).

But you can never be sure that they will return this time with the same objection. None of our admirals expected the Japs to pull a surprise attack on Pearl Harbor.

To come back to the rich for a moment. Suppose it is true that you can't get blood out of a turnip—there is no harm in giving it one more squeeze. Congress is virtually certain to attempt to get some more taxes out of the so-called rich.

So—according to the gossip on Capitol Hill—it will be politically expedient and necessary to take another whack at those in the higher brackets.

A capital levy?

MEASURES have already been introduced to limit individual incomes to \$25,000 a year, then make them pay a tax on that income. Other tax bloodhounds have made soundings on a scheme that would make every person register his wealth—his worldly goods—to the end that the Government might some day be forced to take a portion of it away.

Canada already has done this but has yet to impose a capital levy or confiscate property. Such students of finance as Senator Bennett Champ Clark of Missouri, member of the Senate Finance committee and son of the one-time Champ Clark, Democratic speaker of the House of Representatives, think it is inevitable that some day the Government will impose a capital levy and arbitrarily take away a portion of your savings or capital.

Spending more than half the national income each year for war means heavy burdens for all. Make no mistake about that. The day is past when you can hope to save for the "rainy day." That day is here now.

The money will be obtained

WITH all these tax possibilities you can be pretty certain that Uncle Sam is going to get the \$27,000,000,000 for the credit side of his check book.

But he plans to spend more than twice as much. Where is the remainder to come from?

Whether it is needed or not is no longer a question for any one. Pearl Harbor supplied the answer to that. The President has declared his intention to send our troops, pilots and ships to all parts of the world to fight our Axis enemies, "to hit him and hit him again wherever

and whenever we can reach him." President Roosevelt has spoken and all America has rallied behind him. And rally they will in the famous Churchillian phrase of "blood and sweat and tears." And with taxes, too.

In the fiscal year beginning July 1, the President estimated the total revenues would be \$27,000,000,000—a drop in the bucket alongside the total of \$60,000,000,000 that is to be spent for all purposes.

To obtain the extra money above the tax revenue, the President told the lawmakers, the Government would be compelled to borrow \$34,000,000,000. The President has said he hopes the American people will make larger purchases of defense bonds to help make up a part of the \$34,000,000,000 that must be obtained from some source other than taxes.

But Mr. Roosevelt declared there would be no enforced savings plan beyond the \$2,000,000,000 increase in pay roll taxes for added social security.

Despite what the President said about no plan to force purchase of defense bonds you might just as well prepare yourself to dig down deep in your savings—not only to pay your taxes but to invest in defense bonds. It's no secret in Washington that treasury officials are considering some scheme by which purchase of defense bonds will be made compulsory. If not next month, next year.

Such a hint was included in Secretary Morgenthau's last radio speech in which he said the goal of the Government was for every one to purchase a defense bond every payday.

Voluntary financing

"OUR plans at the Treasury for financing the war are based upon a belief that the American people will want to assume a big share in the cost of the war of their own free will," Secretary Morgenthau recently asserted. "I have such faith in the American people that I believe they will want to do the job in the voluntary way—but it is up to you to prove it."

What does it all add up to? Let us put it in a nut shell—and try to keep it there. The whole of World War No. 1 cost us \$18,000,000,000. This time, just one year will cost three times that amount.

Whatever the final draft of the tax law, these are the goals fixed by the necessities of the hour:

Corporations will pay five times as much to the government as in 1940.

Individuals in income and inheritance taxes—four times as much.

Employment taxes will be twice as high.

Excise taxes will be almost double 1940.

Add to this the possibility of enforced purchase of defense bonds and you can then begin to figure what you are going to do with the balance of your income and with whatever savings you have accumulated to meet a cost of living which is certain to be higher than anything you have seen in a decade.

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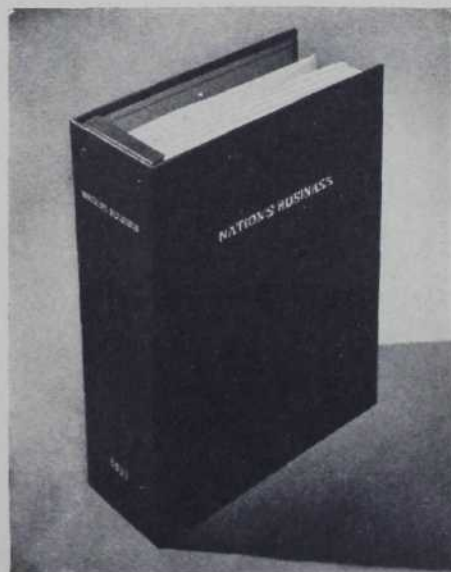
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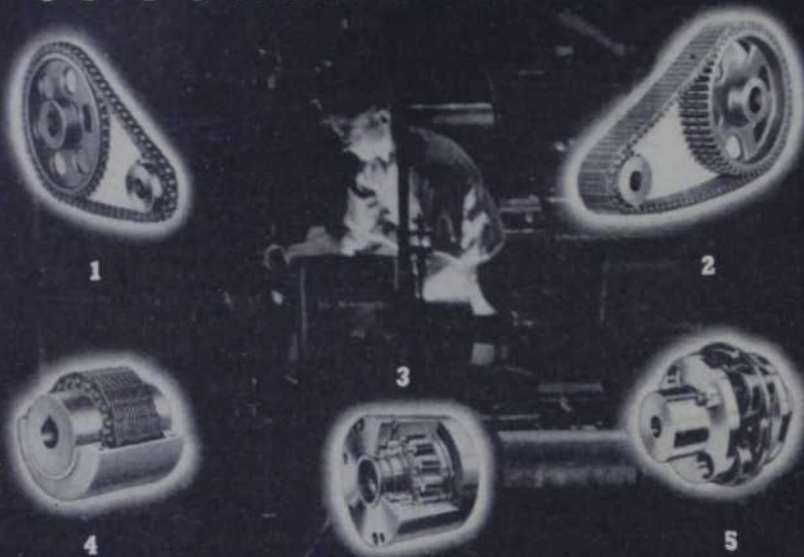
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MORSE CHAIN COMPANY • Ithaca, N. Y.
DIVISION BORG-WARNER CORP.

A Wagon Worth Millions

(Continued from page 40)

that separation might be prevented by vigorous stirring alone?

It was—and the pasteurized cheese business was born. The manufacturer could guarantee that his cheese would keep, that its flavor would not change, that each lot would taste like any other, since he could blend various raw cheeses to get the precise flavor he wanted.

Kraft sold \$5,000 worth of pasteurized cheese in tins in 1915, the first lots going to India and the Orient. The next year, sales went up to \$150,000. Then, with the United States in the war, he began selling to the Army and Navy—one order alone was for 2,000,000 pounds. After the war, cheese in tins was succeeded by cheese in loaves.

The business grew. Other companies began pasteurizing. Consumption was increasing so rapidly that Kraft feared production couldn't keep up—that prices would rise and in turn shut off consumption.

So, while pumping up sales of his pasteurized product, he began trying to increase production of cheese.

Encouraged more production

AT THAT time Wisconsin was producing 70 per cent of our cheese, New York and Pennsylvania together 20 per cent. Kraft's dream was cheese production in every state. In 1922 the governor of Idaho came to him with a sad story of farmers going broke raising potatoes and alfalfa. He wanted Kraft to come out and help.

Middlewestern dairymen looked the state over and said Idaho would be great dairy country but they didn't see what could be done about it. Then Kraft announced that, if the banks would help farmers buy cows, he'd agree to buy every pound of cheese produced in Idaho for the next ten years. Further, he'd pay Wisconsin prices.

Some of the dairymen thought Kraft had let his enthusiasm run away with him.

But Kraft knew that 30,000,000 pounds of Wisconsin cheese was being shipped to the West Coast every year at freight rates double what Idaho cheese would have to bear; his offer was long-headed business. Idaho cheese production increased seven-fold in a decade.

Soon Kraft was approached by some people in Montana's Bitterroot Valley which had gone broke trying to raise apples. Then he moved into the Star Valley of Wyoming, into Utah, Indiana, the South and the Southwest. Sometimes he was invited, sometimes he pushed in.

Always he carried simple ideas: get away from one-crop economies, get off credit and onto a cash basis, produce cheese near each market. He wanted more and more cheese, to process, advertise and sell. But he did not want

Still In Business At the Old Stand...

WHEN this war is over, as it will be some day, the business map will have changed. But *not* beyond all recognition.

For still in business at the old stand will be those far-sighted businesses that still are keeping in touch with former customers and prospects, even though they can't accept orders.

Turn through this issue of Nation's Business again—note the names of the advertisers. These are the firms you will be doing business with two, five, ten years from now.

NATION'S BUSINESS going to 359,171 men—the largest group of business buyers in America

gigantic factories concentrated in one section. He believed in decentralization.

Today he has 8,000 employees but they are scattered all over the nation. He has cheese factories in 23 states and works with farmer cooperatives in all the others except Florida and Louisiana. Paddy, the cheese wagon and one route have become 2,000 fast motor trucks operating out of 250 branches. The man on the truck, like Kraft on his wagon, is a salesman as well as a driver.

Little factories and big volume

IN 1920, only three states were producing as much as 10,000,000 pounds of cheese each. Last year there were 17 such states. This expansion, pioneered by Mr. Kraft, is today paying precious dividends. Out of little factories dotting hundreds of valleys flow streams of cheese to help the British stave off hunger. Last April the Government called on the industry for 250,000,000 pounds of cheese in 15 months. That's the greatest cheese order on record—nearly half as much as our total production in 1940. And it's being delivered without curtailing American consumption.

By November the fabulous pace of 4,000,000 pounds a week for Britain had been achieved.

Everywhere increased production depended upon the coast-to-coast network of factories and trained personnel built up over two decades.

On September 30, the Government phoned Kraft that it must have 2,000,000 pounds of cheese in Baltimore in six days. It looked impossible.

Phones began buzzing—and it still looked impossible.

Then, down in the Ozarks—where cheese-making was unknown until Kraft pioneered—long distance found a Kraft manager who'd figured someone might be wanting cheese in a hurry. He had ten railway cars on a siding, already loaded with cheese.

Kraft's factory in Australia has supplied Anzac troops, particularly those in Egypt. Cheese from his British factory is stocked in British Army canteens. Our own troops ate 500 tons of Kraft's pasteurized cheese in the course of the Louisiana and Carolina maneuvers.

Developing specialty cheeses

THE mass market, which likes a bland, mild cheese, is conquered. Now Kraft is reaching out for the connoisseurs who, until now, have bought imported specialties.

Up in northern Illinois, George Pulkrabek, a Kraft man, has recently perfected processes for mass production of Edam and Gouda cheese—Dutch types which necessitated vast amounts of hand labor until Pulkrabek got them rolling off assembly lines at the rate of 2,500 pounds a day.

At St. Paul, Kraft is using caves along the Mississippi River to cure a Roquefort-type cheese; the caves, dug 50 years ago for apple storing, provide humidity of 95 and a temperature always hovering between 50 and 52 degrees—hot-

test in November, coldest in June. Here you can see 450,000 pounds aging in caves which rent for \$12 a month each.

Kraft suggests that our *per capita* cheese consumption—now six pounds against three in 1911—will eventually rise to 12 pounds, and somehow, you don't doubt him.

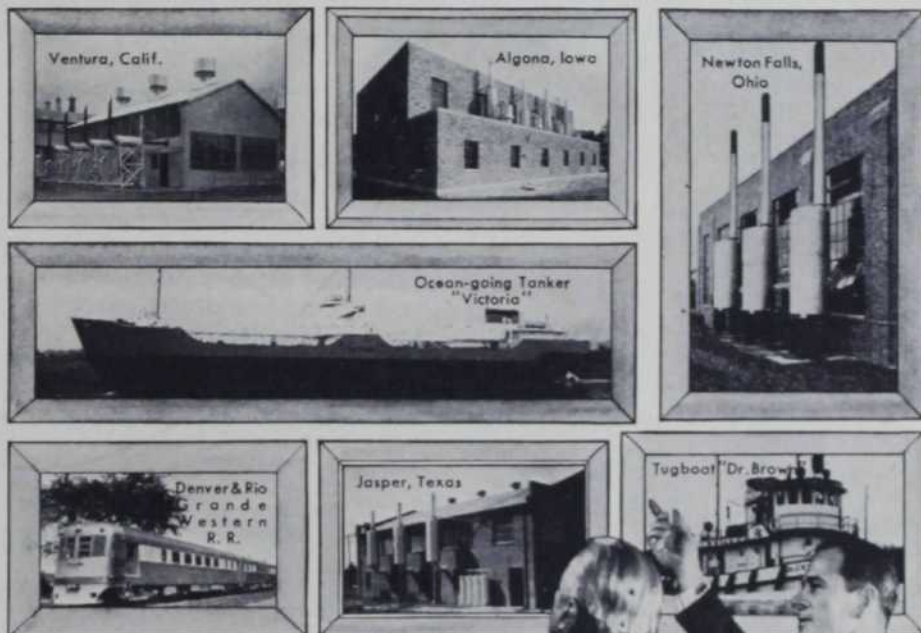
This blue-eyed, stocky man is not the type you ever doubt. His predictions have a way of coming true. In his mind Kraft has always had a pattern of the future. He was thinking of the biggest cheese business in America when he had only one horse and wagon. One by one he brought his brothers off the family farm until eight were working together in Chicago. Five of the Kraft brothers have been there now for 33 years.

Each year 32 4-H Club members go to

college on Kraft scholarships. He gives much time to the 4-H; more both of time and money to the Baptist Church.

There are 350 Kraft men in the Army. Kraft guarantees their jobs on demobilization. In addition, each gets a letter from Kraft and a carton of cigarettes. Characteristically, Kraft spent a lot of time and pains finding out what to give these men for Christmas—what soldiers need and usually don't have. He wrote to officers in various camps, phoned them, and had one group come into his office for consultation. They agreed, by the way, on a leather personal document file.

Soldiers on leave in Chicago, Kraft employees he has never seen, come in to say hello to "J. L." The pioneer from Ontario has built more than an industry.



Wherever you look
these Snubbers are providing

QUIET DIESEL EXHAUSTS

Diesel engines are now running in all types of plants without objectionable exhaust noise. Hundreds of installations, like those pictured above, are operating in critical locations without exhaust noise complaints. Why? Because these Diesel engines are quieted with Burgess Exhaust Snubbers . . . and there is no interference with efficient engine operation.



Burgess SDHC
Series Snubber.

The Burgess snubbing principle removes the source of exhaust noise before the noise can occur. That is why a Burgess Snubber is different in design and performance from ordinary mufflers. For further information about this new method of quieting Diesel exhausts, write Acoustic Division, Burgess Battery Company, 508 W. Huron St., Chicago, Ill.

BURGESS SNUBBERS

Originators of Snubbing Principle for Quietening Diesel Exhausts—Pat. and Pats. Applied For

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When You Write Your Congressman

By PAUL SCHARRENBURG

MUCH has been said and written about the outgoing mail of Congress and the alleged abuse of the franking privilege. Recently the nature and volume of this franked mail has been deemed sufficiently important to rate newspaper headlines. As a matter of fact, however, Congress is a babe in the woods when the rising cost of franking privileges is analyzed.

In the fiscal year, 1929, the cost of franking out congressional mail was \$957,964. For the Executive Departments of the federal Government it was \$8,169,170. In 1940 the cost of handling the congressional mail was \$1,217,346, an increase of \$259,382 in 11 years. In the same period the cost of handling the mail of the Executive Departments was \$41,533,510, an increase of \$33,364,340.

It is obvious, of course, that, with all this outgoing mail emanating from 531 members of Congress, there must be a considerable volume of incoming mail. Congress, when in session, has a working population of approximately 4,000. Aside from 96 Senators and 435 members of the House, there are on the Senate pay roll approximately 1,300 employees, including secretaries, clerks, stenographers, bookkeepers, doorkeepers, guards, messengers, etc. The House pay roll carries in round numbers 2,000 such employees. In addition, there are employed in the Capitol and in the three connecting office buildings various maintenance men and others who are not, however, on the congressional pay roll.

This working population of 4,000 together with their families and dependents would be equivalent to the population of a city of 15,000. Yet, a recent survey disclosed that the incoming mail of Congress, by weight, almost equals the mail received by a city of 75,000. On the average, 125 sacks of mail are received daily on Capitol Hill. When Congress is about to act on a measure of nation-wide interest, mail floods the offices of our legislators.

An informal but careful check revealed that Senator Wagner of New York receives more mail than any other member of Congress. Others near the top are Senators Johnson of California, Guffey of Pennsylvania, Walsh of Massachusetts and Taft of Ohio. In the House, the chairmen of the more important committees are in the lead as mail recipients.

Congressional mail is sorted and distributed from five regular Post Offices—two in the Capitol and one in each of the three adjoining office buildings.

The Congressional Postal Service is staffed by 73 employees, 28 in the House and 45 in the Senate. House and Senate have entirely separate units, with a Postmaster for each. All hold their jobs on the patronage basis and are subject to dismissal when the fortunes of politics change the complexion of House or Senate. Many of the Capitol Post Office employees are ambitious young men working their way through college.

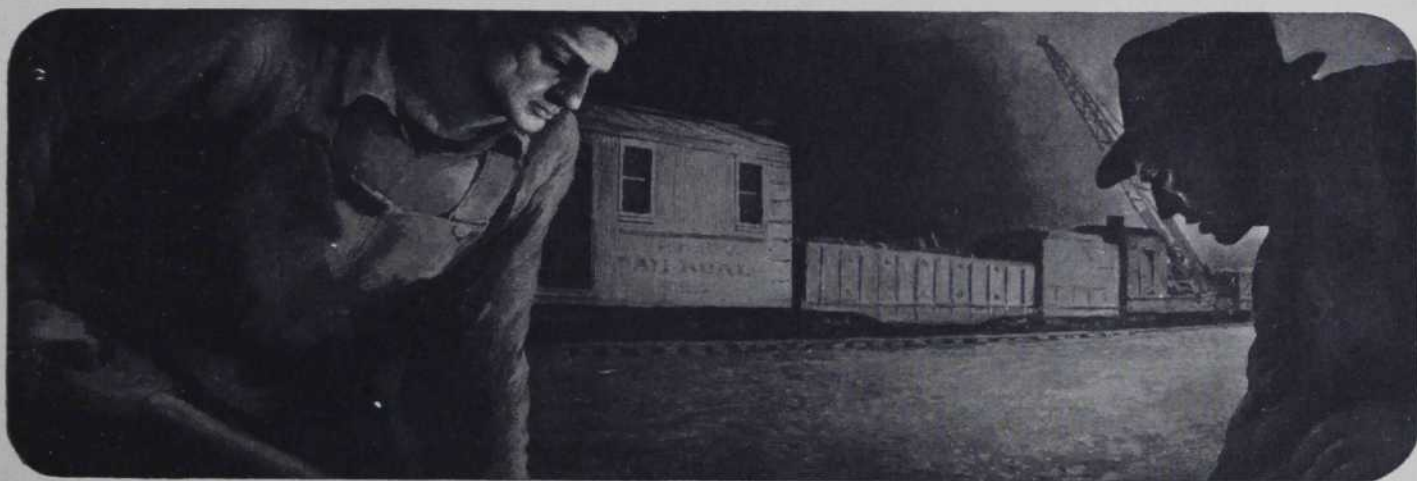
Sublime and ridiculous

THE incoming mail of Congress runs from the sublime to the ridiculous, from the exalted to the pitiful. Most of it concerns current problems. The legislators are asked to vote for or against pending bills. When popular interest is aroused and this type of missives is centered on a particular bill most members of Congress keep tab on their mail. Few have time to read all their mail but everyone knows on what side of the question the urge for writing is strongest. Mimeographed letters and post cards with a printed message comprise a considerable part of each member's mail. Inspired or promoted letters, made to look like individual appeals, are easily detected by the experienced secretaries who open and read the mail before the "boss" sees such part of it as may be deemed of sufficient importance.

A great many of the correspondents have extraordinary faith in the potency of the words "personal and confidential" when written on the envelope. Registered mail is received frequently with the specific request that it be delivered "in person" or with the demand that receipt must be acknowledged by the addressee's own signature. Air mail and special delivery stamps are used out of all proportion to need. All this extravagance is doubtless due to the hopeful belief that such mail receives first or special consideration.

Alas, a preferred status cannot be acquired by such crude methods. All incoming mail goes through the same grinder, except, perhaps, letters from really influential constituents.

HOW TO STOP AN EARTHQUAKE



COMFORTABLE in your Pullman chair . . . the miles roll off so smoothly . . . you never realize what a battle railroad men have won over miniature earthquakes.

Earthquakes that are stopped *before* they start!

For when winter strikes . . . strange things can happen along the right of way. In the soil below, the moisture sometimes freezes . . . heaving up the earth . . . disturbing the tracks above.

But in *rock salt*—the deadliest enemy of snow and ice—progressive maintenance engineers have found a new ally in their battle against “track heaves.”

By adding rock salt to the roadbed’s sub-surface soil, freezing is greatly reduced. Track heaves are

often *eliminated*! Yet railroad men are not alone in discovering new uses for salt, one of the most vital substances in the history of man. Leaders in glass-making, tanning and dyeing . . . in the meat-packing and canning industries . . . rely on salt or salt processes by International. And salt serves in still scores more industries. Salt is also of paramount importance to stock feeding and for snow and ice removal on streets and highways.

Would you like to test your knowledge of common salt? Let us know where we can send you the booklet, “*Salt by International*.” International Salt Co., Inc., Scranton, Pa. Rock salt, evaporated salt, lixate brine, Sterling table salt—for industry, agriculture, the home.



Radio...all out for Victory

Research and invention have placed radio in the first line of battle

COMMUNICATION—rapid communication—is a vital necessity, on land, at sea and in the air. RCA research and engineering developments in both radio and electronics are strengthening—and will further fortify—the bulwarks of our communications system. At Princeton, New Jersey, the new RCA Laboratories—the foremost center of radio research in the world—are under construction.

★ ★ ★

International circuits, operating on short and long waves, have made the United States the communication center of the world. Today, R.C.A. Communications, Inc., conducts direct radiotelegraph service with 49 countries.

★ ★ ★

Production of radio equipment is essential for news and timely information, for military and naval communications, for dissemination of news among foreign countries. The "arsenal of democracy" has a radio voice unsurpassed in range and efficiency. In the RCA Manufacturing Company's plants, workers have pledged themselves to "beat the promise," in production and delivery dates of radio equipment needed for war and civilian defense.

★ ★ ★

American life and property at sea are being safeguarded by ship-and-shore stations.

The Radiomarine Corporation of America has equipped more than 1500 American vessels with radio apparatus and is completely engaged in an all-out war effort.

★ ★ ★

Radio broadcasting is keeping the American people informed accurately and up-to-the-minute. It is a life-line of communication reaching 55,000,000 radio sets in homes and automobiles. It stands as the very symbol of democracy and is one of the essential freedoms for which America fights. The National Broadcasting Company—a service of RCA—and its associated stations, are fully organized for the coordination of wartime broadcasting.

★ ★ ★

New radio operators and technicians must be trained for wartime posts. RCA Institutes, the pioneer radio school of its kind in the United States, has more than 1,200 students enrolled and studying in its New York and Chicago classrooms.

★ ★ ★

When war came and America took its place on the widespread fighting front, radio was At the Ready... with radio men and radio facilities prepared to answer the call to duty "in the most tremendous undertaking of our national history."

David Sarnoff

PRESIDENT



Radio Corporation of America

RADIO CITY, NEW YORK

The Services of RCA: RCA Manufacturing Co., Inc. • RCA Laboratories • R.C.A. Communications, Inc. National Broadcasting Company, Inc. • Radiomarine Corporation of America • RCA Institutes, Inc.



how troubles can pile up!

*Yes—troubles can pile up
in dozens of different ways.*

• • •

It is trouble enough, for example, to get banged up in an automobile accident. Repair bills on your car represent more trouble. Repair bills on the other person's car can be another blow. Most expensive of all can be a damage suit for injuries to others.

• • •

To cover all these troubles requires four forms of insurance. Do you have them all? If in doubt, ask your local agent or broker. He can give you

expert, face-to-face advice on fitting insurance to your needs . . . he stands ready to give you prompt assistance in event of loss . . . which is why the Aetna Fire Group sells only through reliable local representatives.

• • •

Remember, too, that insurance with a capital stock company such as those comprising the Aetna Fire Group, is backed by both a paid-in capital and surplus. You are never liable for assessment.

• • •

**Don't Guess About Insurance
—CONSULT YOUR LOCAL
AGENT OR BROKER**

Since 1819 through conflagrations, wars and financial depressions, no policyholder has ever suffered loss because of failure of the Aetna to meet its obligations.

WARS	CONFLAGRATIONS	DEPRESSIONS
1846 Mexican War	1835—New York City	1819
1861 Civil War	1845—New York City	1837
1898 Spanish-American War	1851—San Francisco	1843
1917 World War I	1866—Portland, Me.	1857
1941 World War 2	1871—Chicago	1873
	1872—Boston	1893
	1877—St. John, N.B.	1907
	1889—Seattle; Spokane	1921
	1901—Jacksonville, Fla.	1929
	1904—Baltimore	
	1906—San Francisco	
	1908—Chelsea	
	1914—Salem	



The Aetna Fire Group

HARTFORD, CONNECTICUT

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Within the ivy-covered walls of this distillery no whiskey other than Old Taylor has ever been made.

